

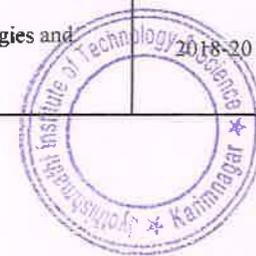
Number of research papers per teacher in the Journals notified on UGC website during 2018-19

Sl.No.	Title of paper	Name of the author/s	Department of the teacher	Name of journal	Year of publication	ISBN/ISSN number	Link of the recognition in UGC enlistment of the Journal
1	A REVIEW ON ALGORITHM OF ASSOCIATION RULE MINING AND INDIRECT ASSOCIATION MINING	N. Venkateswaran	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
2	A KEYWORD BASED TRAVEL ROUTE RECOMMENDATION	Dr. M. Sujatha	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
3	TOWARDS SECURITY PROTECTING SUBSTANCE BASED PICTURE RECOVERY IN CLOUD	Dr.R.Jegadeesan	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
4	DESCRIBING AND PREDICTING EARLY REVIEWERS FOR EFFICIENT PRODUCT MARKETING ON E-COMMERCE SITES	Mr. M. Ravindar	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
5	MONETARY EXTORTION DISCOVERY USING ANOMALY FEATURE DETECTION	Dr. D. Srinivas	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
6	GENERIC ITEM SET MINING WITH DIFFERENTIAL PRIVACY OVER MASSIVE SCALE INFORMATION	Mr. V. Malsoru	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
7	TWO FACTOR DATA SECURITY MECHANISM FOR CLOUD STORAGE	Mr. V. Nareekanth	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
8	SEMANTIC CONSCIOUS LOOKING OVER ENCODED INFORMATION FOR DISTRIBUTED COMPUTING	Mr. P.Balakishan	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf



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9	PREDICTING PATIENT ADMISSIONS FROM THE EMERGENCY	Mr. M. Ravindar	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UG C-Cancelled-List.pdf
10	PARTITIONING AND CLONING OF CLOUD DATA FOR BEST PERFORMANCE AND SECURITY	Mrs. V. Neelima	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UG C-Cancelled-List.pdf
11	AGRONOMIST SELF-DESTRUCTION DISSECTION AND GOVERNMENT RECIPROCATION	Dr.R.Jegadeesan	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UG C-Cancelled-List.pdf
12	SECURE DATA SHARING TECHNIQUE FOR ELECTRONIC MEDICAL RECORD WITH MOBILE DEVICES	Dr. CH. Srinivas	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UG C-Cancelled-List.pdf
13	EFFICIENT DATA AWARE COLLABORATIVE FILTERING FOR LOCATION RECOMMENDATION	Mr.R. Venkateshwarlu	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UG C-Cancelled-List.pdf
14	CLASSIFICATION OF PERSONALIZED NEWS TOPICS IN SOCIAL MEDIA USING SOCIRANK	Mr.N.Venkateswaran	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UG C-Cancelled-List.pdf
15	SECURITY PORTRAYAL AND EVALUATION IN INFORMATION DISTRIBUTING	Mrs. P. Pranitha	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UG C-Cancelled-List.pdf
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17	GENERATING HIGH UTILITY PATTERNS FROM LARGE DATA SETS USING REDUCED TRANSACTION PATTERN LIST	Mrs. G. Sri Latha	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UG C-Cancelled-List.pdf



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21	PUBLIC HEALTH MONITORING ON SOCIAL NETWORKS	Mrs. G. Sindhusa	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UG C-Cancelled-List.pdf
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35	ONLINE SOCIAL VOTING BASED ON COLLABORATIVE FILTERING	Dr. CH. Srinivas	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf



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38	EFFICIENT CLUE-BASED ROUTE SEARCH ON ROAD NETWORKS	Mrs.P. Pranitha	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
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44	A COMPARATIVE STUDY ON BRAIN TUMOR DETECTION USING IMAGE PROCESSING K-MEANS AND EM ALGORITHM	Dr.S.Prabaharan	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf



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49	AN EFFECTIVE COLLABORATIVE FILTERING FOR UNPREFERED ITEMS BY USING L- INJECTION	Dr. M. Sujatha	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
50	ADVANCED APPROACH FOR DETECTING SPAMMERS IN TWITTER	Dr. CH. Srinivas	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
51	AN EFFICIENT AND SECURE DATA RETRIEVAL FOR SCALABLE MILITARY NETWORKS	Mrs.V. Neelima	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
52	PREDICTION OF ROAD TRAFFIC FROM MULTIPLE SOURCES USING GAUSSIAN APPROACH	Dr. D. Srinivas	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
53	High Throughput Data Transfer using Wireless Network Dynamic Metric Computation in Multicast Protocol	Dr.R.JEGADEESAN	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf



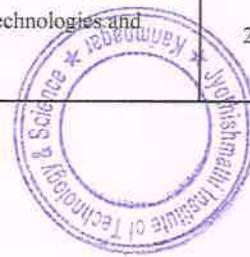
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55	MACHINE LEARNING TECHNIQUES USED TO IDENTIFY LUNG CANCER	DR.M.SUJATHA	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
56	An efficient and secure Data loss prevention using hybrid cryptosystem for Cloud data storage	Dr.CH.SRINIVAS	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
57	Mobile Agent Data Aggregation Technique for Wireless Sensor Networks	Dr. D.SRINIVAS	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
58	PERFORMANCE EVALUATION OF K-MEDOIDS TECHNIQUE FOR NODE CLUSTERING IN WSN ROUTING SYSTEM SIBER-DELTA	V.NEELIMA	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
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60	A SURVEY ON: BLUETOOTH LOW ENERGY MESH BASED COMMUNICATION NETWORK	N.MAHESH	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
61	A survey on : an improved energy efficient protocol for Wireless Sensor Networks	P.BALAKISHAN	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
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63	Comparison of DES, AES, BLOWFISH and TwoFish Symmetric Key Cryptography Algorithms	R.VENKATESHWARULU	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
64	Evolution Of Web Log Mining Projected On Improved Fuzzy C-Means Clustering Algorithm	P.PRANITHA	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
65	Survey on Depth-Based Routing Variants for Underwater Wireless Sensor Networks	B.UMARANI	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
66	Mining Association Rules in Incremental Mining using INC-PNAR	G.SRILATHA	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
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69	A survey on Internet of Things (IoT) Security	G.RANJITH KUMAR	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
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71	A Review of Routing Protocols for Mobile Specially appointed Networks (MANET)	G.SINDHUSHA	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf



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74	APPLICATIONS AND ASSOCIATED ATTACKS IN WIRELESS SENSOR NETWORK	N.VENKATESHWARAN	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
75	CLASSIFICATION OF ATTACKS IN CRYPTOGRAPHY AND NETWORK SECURITY	N.VENKATESHWARAN	CSE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
76	Survey: Localization of wireless sensor networks: Issues and Challenges	A.Venkat Reddy	ECE	International Journal of Innovations in Engineering and Science	2018-2019	ISSN: 2456-3463	http://www.ijies.net/final-docs/final-pdf/290519ET12.pdf
77	Image Indexing Using Integration of Gabor Filter And HSV Algorithm	M.Ramesh	ECE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
78	CPW FEED MICROSTRIP PATCH ANTENNA FOR BROADBAND WIRELESS SYSTEM	Dr. Samiran Chatterjee & S.Sudhakar	ECE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
79	DEFECTED GROUND STRUCTURE MICROSTRIP ANTENNA BY USING FINITE GROUND PLANE	Dr. Samiran Chatterjee & D.Mahesh Kumar	ECE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
80	Design and Analysis of Size Deduced Square Printed Patch Antenna with Transmission Line Feed	Dr. Samiran Chatterjee & J.Ramesh	ECE	Journal of Emerging Technologies and Innovative Research	2018-2019	ISSN: 2349-5162	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf



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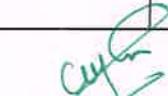
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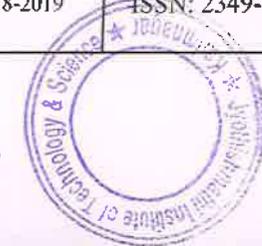
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A. Venkat Reddy
Principal
Jyothishmathi Institute of
Technology & Science
Karimnagar.



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Karimnagar.



A REVIEW ON ALGORITHM OF ASSOCIATION RULE MINING AND INDIRECT ASSOCIATION MINING

¹Keerthana, ²N.Venkateswaran, ³R.Jegadeesan ³V.Shruthi, ⁴R.Sindhuja
^{1,3,4}Student, ²Associate Professor, Jyothishmathi Institute of Technology And Science
 Computer Science and Engineering

Abstract: Data mining is a process to extort the knowledge and exciting patterns to expect useful information from massive databases for the user. Association Rule Mining is a vital research area and is helpful in marketing and other varied fields. It discovers the interesting associations among data items. Many techniques and measures are proposed to extract new rules. In this survey, the rules not brought together will call it as negative association rules, and it has received some notice and useful in the real world. But it is difficult to identify the negative association rules. To resolve this problem, Indirect Association Rule Mining has proposed. This paper is concerned with providing the concept of Association Rules, Negative Association Rules, Indirect Association Rules and an overview of existing algorithms.

Keywords: Data mining, Association Rules, Positive and Negative Association Rules, Indirect Associations.

I. INTRODUCTION

Data mining technique is the process of extracting implicit data, previously unknown, and potentially useful information from a massive volume of fact or data. Through the accretion of previous and current data with historical data, enterprises find themselves in possession of a more substantial amount of data sets in electronic form than at any time heretofore. The research and application of data mining techniques are a hot spot in the database and artificial intelligence in recent years. Various methods have been employed to convert the data into information, including clustering, classification, regression, association rule induction, sequencing discovery, and these become the significant areas of interest in data mining. Among these Association Rule Mining mines useful information from a vast amount of data by generating rules, which has become an important research topic among the various data mining problems. Association rules have been an extensively comprehensive way of study in the literature for their usefulness in many application domains such as market basket analysis, recommender systems, diagnosis decisions support, telecommunication, intrusion detection, etc. Association Rules Mining first introduced by R. Agrawal. In association rule analysis is the task of discovering association rules that frequently occur in a given data set. A typical example of an association rule mining application is the technique of market basket analysis. In this process cycle, the behavior of the customers will observe, when buying different products in a shopping mall. The discovering knowledge of interesting patterns in the collection of data can lead to important marketing and strategic management. For instance, if a customer purchases bread, what is the probability that he/she may buy milk as well? Depending on the likelihood of such an association, marketing stakeholders can develop better planning strategy to improve business. All the previous association algorithm, rule mining algorithms, were implemented to find the positive associations between product items. Based on positive associations, we refer to associations between objects existing in transactions (i.e., items bought). According to customer buying behavior, the negative association can provide valuable information, in devising marketing strategies.

II. BASIC CONCEPTS

Let $I = \{i_1, i_2, \dots, i_n\}$ be a set of 'n' distinct constants called items. Let D be a collection of transactions, where each transaction T is a set of items and each transaction associated with a unique identifier called 'TID'. Let A , called an itemset, be a set of items in I . The collection of items in the itemset is the length (or the size) of an itemset. Itemsets of length k will be referred to as k -itemsets. A transaction T is referred to contain A , if $A \subseteq T$, an association rule method is an implication of form $A \Rightarrow B$, where $A \subseteq I$, $B \subseteq I$, and $A \cap B = \emptyset$. We call A the antecedent of the rule, and B the consequent of the rule. The rule $A \Rightarrow B$ has support (denoted as support) s in DB if $s\%$ of the transactions in D contains $A \Rightarrow B$. Besides, the support of the rule is the probability that A and B held together among all the possibilities presented cases. i.e. $\text{support}(A \Rightarrow B) = \text{supp}(A \cup B) = P(A \cup B)$. The rule $A \Rightarrow B$ has a measure of its strength called confidence (denoted as conf) c if $c\%$ of transactions in DB that contain A also contain B . Besides, the confidence of the rule is the conditional probability that consequent B is true under the condition of antecedent A , i.e. $\text{conf}(A \Rightarrow B) = P(B|A) = \text{supp}(A \cup B) / \text{supp}(A)$. The problem of discovering all the association rules from a set of transactions D consists of generating the rules, that have support and create confidence that greater than a given threshold. These rules referred to as strong rules, and the framework is known as the support-confidence framework for association rule mining. A contrary association rule is an implication of form $X \Rightarrow Y$ (or $\neg X \Rightarrow Y$ or $\neg X \Rightarrow \neg Y$), where the $X \subseteq I$, $Y \subseteq I$ and $X \cap Y = \emptyset$, although the rule in the form of $\neg X \Rightarrow Y$ Contains harmful elements, it is equivalent to a definite association rule in the way of $Y \Rightarrow X$. Therefore it is not considered as a contrary association rule. In contrast to real standards, a different control encapsulates the relationship between the frequent occurrences of one set of items with the not available of the other collection of objects. The rule $X \Rightarrow \neg Y$ has supports $\%$ in the data sets, its $\%$ of transactions in T contain article set X while do not contain itemsets. The support of a contrary association rule, $\text{support}(X \Rightarrow \neg Y)$, is the frequency of occurrence of transactions with item set X in the absence of item set Y . Let U be the set of operations that contain all elements in X . The rule $X \Rightarrow \neg Y$ will hold in the given

A KEYWORD BASED TRAVEL ROUTE RECOMMENDATION

¹Dr.M.Sujatha, ²Dr. R. Jegadeesan ³Ch.Akash chandra, ⁴Y.Anirudh, ⁵Aatika Fatima

^{3,4,5}Final year Student Computer science and Engineering, ^{1,2}Associate Professor-CSE
^{1,2,3,4,5}Jyotishmathi Institute of Technology and Science, Karimnagar, India

ABSTRACT: The Popularity of social media (eg, Facebook and Flicker), users can share their easily check-in records and photos during their trips. In view of the massive range of user quality historical records in social media, tend to aim to get travel experiences to facilitate trip coming up with. When coming up with a visit, users continuously have specific preferences relating to their visits. Instead of prescribing restricted users to question choices like locations, activities, or time periods, tend to text descriptions concerning capricious as keywords about customized needs. Prior works have elaborate on mining and ranking existing arrival routes from knowledge to fulfill the necessity for automatic trip organization, tend to claim that additional options of Places of Interest (POIs) ought to be Extracted. Therefore, throughout paper, we have a tendency to tend to associate propose economical Keyword-aware framework Representative Travel Route That use information extraction from users' quality historical records and social interactions. Explicitly, we've got a keyword extraction module designed to classify the POI-related tags, for effective matching with question keywords. we've got additional route designed to reconstruction algorithmic rule to construct that fulfill the candidates route necessities. to supply appropriate question results, tend to explore Representative Skyline ideas, That is, the Skyline routes That best describes the trade-offs Among totally different dish options to gauge the effectiveness and potency of the planned algorithms, got Conducted in depth experiments-actual on location - based social network datasets.

Terms Index- Location-based social network, text mining, travel route recommendation.

I. INTRODUCTION

Even though their unit are various tourist websites and travel agencies try to supply varied travel packages, tourists simply at a loss concerning become a way to create a selection and neither may regulate they plan of action the [1]. Besides, if tourists try and prepares the travel route by themselves, tremendous information is straightforward to exhaust them eleven considering the interest situation, visiting time, price, etc. thus it's fascinating to travel if a holidaymaker recommender may facilitate social network to seek out places matching his interests. Location-Based Social Network (LBSN) service permit users to perform arrival and Share Their arrival information With Their friends [2]. especially, eleven user is traveling, the arrival information unit area travel route With indeed to some photos and tag data [3]. As a result, a colossal variety of routes generated unit area, play a vital role that in several well-established analysis areas, like quality prediction, urban and traffic coming up with management. during esta paper, we have a tendency to concentrate on trip coming up with and will discover travel experiences from shared information in location-based social networks [4]. To facilitate trip coming up with, the previous works in an give a user interface within which might submit the question region and also the full period. in distinction, we have a tendency to take into account a state of affairs wherever users specify keywords with their preferences. as an example, once coming up with a state visit in the capital, one would have "Opera House".[5]

II. RELATED WORK

Arase Y., X. Xie [6] explained that photo sharing is one of the foremost widespread internet services. pic sharing sites give tags and functions to feature geo-tags to pics to create photo simple organization. individuals take photos considering that photos to record one thing that draws them, geo-tagged information square measure supply an expensive that reflects people's unforgettable events related to locations. during esta paper, we tend to concentrate on geo-tagged photos and propose a way to sight people's frequent trip patterns, ie, typical sequences of visited cities and durations of as descriptive tags furthermore keep that characterize the trip patterns. our initial segments technique pic collections and categorizes them into visits their trip supported themes, visiting landmarks like communing with nature or. our technique mines frequent patterns trip theme for every class trip. we tend to 5.7 million crawled geo-tagged photo pics and performed pattern mining trip. the experimental result shows our technique outperforms that alternative ways and might baseline section properly pic pic visits into collections with accuracy of seventy eight associate. for categorization trip, our technique will categorize regarding eightieth of visits tags and titles of exploitation photos and visited cities as options. Finally, we tend to illustrate fascinating samples of trip patterns detected from our dataset associated show an application with users will search frequent that trip patterns by querying a destination, visit length, and trip theme on the trip. 7 million geo-tagged photo pics and performed pattern mining trip. The experimental result shows our technique outperforms that alternative ways and might baseline section properly pic pic visits into collections with accuracy of seventy eight associate. for categorization trip, our technique will categorize regarding eightieth of visits tags and titles of exploitation photos and visited cities as options. Finally, we tend to illustrate fascinating samples of trip patterns detected from our dataset associated show an application with users will search frequent that trip patterns by querying a destination, visit length, and trip theme on the trip.

X. Cao, L. Chen [7] explained that identifying a desirable route is a vital downside that finds applications in map services. eleven user plans a visit at intervals to town, the user might want to search out "a most well-liked route such it passes by mall, restaurant, and pub, and therefore the period of time to and from his building is at intervals four hours. "However, none of the algorithms within the existing work on designing route may be wont to answer such queries. motivated by esta, we tend to outline the matter of keyword-aware best route question, denoted by cubic measure, that is to search out an best route such it

Towards Security Protecting Substance Based Picture Recovery in Cloud

¹Dr. R. Jegadeesan ²N. Amulya, ³K. Lavanya, ⁴Dr.S.Prabakaran. ⁵G.Saiteja, ⁶CH. Mehersai,

^{1,4}Associate Professor-CSE ^{2,3,5,6}Final year Student Computer science and Engineering,

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

ABSTRACT: Now a days Cloud storage is one of the huge repository to store and usage of services for the remote purpose. In our regular days we used to share data in many ways. While sharing the private data, privacy preserving is becoming an increasingly significant issue. In such case images also exposed to public when the related term or keyword is searched. In these notes we use AIES (Advanced Image Encryption Schemes)-SCBIR (Specific Content Based Image Retrieval)-According to the image content based on color, shapes etc., the images can be retrieved. So the people who know the content can access the images. It helps to secure the images which are in private from the public. This method helps to secure images by using encryption schemes and privacy preserving in cloud environment in which it can include the benefit of encryption on the server side also.

Index terms: Content Based Image Retrieval, Cloud computing, searchable encryption, image retrieval

1. INTRODUCTION

Thanks to affordable storage and straight forward internet hosting, the world has witnessed an incredible growth within the quantity, handiness and importance of pictures in our daily life. Pictures begin to play a vital role in numerous fields like medication, journalism, advertising, design, education and amusement, etc. The need for economical storage and retrieval of pictures is strengthened by the rise of large scale image databases among all types of areas. Meanwhile, as a rising technology, Specific Content Based Image Retrieval (SCBIR) shows enough promise and maturity to be useful in several real-world image retrieval applications. For example, clinicians might use SCBIR to retrieve the similar cases of the patients to facilitate the clinical decision-making process [1]. As another example, enforcement agencies usually compare the proof from the crime scene with the records in their archives [2]. However, such type of SCBIR service is intensive in each computation and storage intensive. An oversized image information sometimes consists of countless images. Sometimes, one digital image would possibly contain more than twenty million dimensions and its size may be higher than forty megabytes, like diagnostic procedure pictures [3]. Moreover, SCBIR usually has high machine complexity because of the high spatial property of image information. Cloud computing offers an excellent chance to supply on-demand access to ample computation and storage resource, that makes it a primary alternative for image storage and SCBIR outsourcing. By deploying such image retrieval outsourcing, the data owner is no longer required to keep up the image information domestically. An authorized data user can query the cloud for CBIR service while not interacting with the data owner. In spite of the enormous advantages, privacy becomes the most important concern regarding SCBIR outsourcing. For example, the patients won't wish to disclose their medical images. In fact, the Health Insurance Portability and Accountability Act (HIPAA) sets legal necessities to shield patients' privacy.

Contribution. In this paper, we have a tendency to study the privacy-preserving SCBIR outsourcing drawback and present a practical solution. We tend to utilize the techniques from security, image processing and data retrieval domains to attain secure and economical looking over encrypted pictures. The proposed theme supports local-feature based SCBIR with the Earth Mover's Distance (EMD) as a resemblance metric. In particular, a secure transformation is intended in order that the cloud server will solve the EMD drawback with the privacy preserved. Local sensitive hash is utilized to realize constant search efficiency.

2. RELATED WORK

The data confidentiality is explained in a way that if a client wishes to retrieve only documents containing certain words, it was not previously known how to let the data storage server perform the search and answer the query, without loss of data confidentiality [16]. Encrypted storage protects the data against illegal access, but it complicates some basic, yet important functionality such as the search on the data. To achieve search over encrypted data without compromising the privacy, considerable amount of searchable encryption schemes have been proposed in the literature [17]. Secure index is a system that permits a query, with a "trapdoor" for a word x to check in $O(1)$ time given that the index contains x ; The index reveals no info concerning its contents without valid trapdoors, and trapdoors will solely be generated with a secret key. Secure indexes are a natural extension of problem of constructing data structures with privacy guarantees such as those provided by history-free data structures [18]. Image content based retrieval is rising as a very important research space with application to digital libraries and multimedia system databases. The main focus of this paper is on the image process aspects and specially using texture data for browsing and retrieval of large image information [19]. Searchable Symmetric Encryption (SSE) permits a part to outsource the storage of his data to another party in a private way, whereas maintaining the flexibility to search over it [20]. The comparison of the strategies of shape-based feature extraction and illustration. About forty techniques for extraction of shape features are shortly

Describing and Predicting Early Reviewers for Efficient Product Marketing on E-Commerce Sites

¹M.Ravindar, ²Dr. R. Jegadeesan ³T.Anusha, ⁴N.Manisha, ⁵K.Saimanith, ⁶M.Sowmya
^{3,4,5,6}Final year student Computer Science & Engineering, ^{1,2}Associate professor-CSE
^{1,2,3,4,5}Jyothishmathi Institute of Technology & Science, Karimnagar, India

ABSTRACT: Now a days, the decision of purchasing an online product is relying on the reviews it get. This paper emphasizes an marketing a product based on its reviews. These reviews are mainly grouped into three types they are premature reviews, matured reviews and late responding reviews. However, this division is done on the basis of time span of a product as it has starting stage, central stage and finishing stage in its sale process. Comparison of these reviews is done on real time E commerce websites for example amazon and yelp. It is known that the impact of premature reviews is high on the customers when compared with matured and late responding reviews. As the product is newly available in the market and based on the reviews the scope of the project in sustaining will be decided. The product is judged as a good product/bad product by depending on its attributes like rating, number of positive responses, Number of product sold in a specific time and so on.....The implementation of this process is done by collecting the sample datasets of reviews on e commerce websites.

Index terms : premature reviewer, early review, embedding model

1. INTRODUCTION

The e commerce websites are useful for users to share their views on online purchasing which contains more information while purchasing the product. We categorized the reviews based upon lifetime. Users who posts reviews early are considered as Premature reviewers. These are helpful in determining the success or failure of the product.[1][2] and hence the companies need to identify them.

The fundamental role of premature reviewers has attracted great attention for the sale of products [3]. Amazon advocated a premature review program that helps acquire pre-mature reviewers in case there are fewer revisions. Amazon Vine invites the most reliable people who tend to post useful comments. The screening of premature adopters in the diffusion of innovation has attracted much attention from the research community. The following are some of the fundamental dissemination processes: Attribute of innovation. Communication channel Social network structures [5]. Innovation studies have been carried out extensively in social networks [6] - [8]. For any given product, reviewers are viewed based on the timestamp as premature, mature, and late-response reviews. To analyze the characteristics of premature reviews, we consider two important metrics:

- 1) Premature reviews tend to assign a higher score.
- 2) Premature reviews tend to publish useful criticisms.

In addition, we explain the findings of herd behavior [14] [15] widely studied in economics and sociology [9] [11] which refers to the fact that individuals depend to a large extent on others when making decisions. We predicted premature reviews based on the multiplayer competition game [12] [13].

The task of Premature reviewer prediction has received very less attention, our contributions are summarized as follows:

- We first characterize Premature reviews on two real world datasets(Amazon ,Yelp).
- We quantitatively analyze the characteristics which is having a high impact on the product.
- Extensive experiments have stated that the effectiveness of our approach got the prediction of Premature reviewers.

EXISTING SYSTEM:

- Previous studies have extremely emphasized the development that people are powerfully influenced by the selections of others, which might be explained by herd behavior. The influence of early reviews on ulterior purchase is understood as a special case of swarming result. Early reviews contain vital product evaluations from previous adopters, that are valuable reference resources for consequent purchase selections. As shown in existing papers, once customers use the merchandise evaluations of others to estimate product quality on the web, herd behavior happens within the on-line searching method.

MONETARY EXTORTION DISCOVERY USING ANOMALY FEATURE DETECTION

¹Dr.D.Srinivas, ²Dr. R. Jegadeesan ³T.Samyuktha, ⁴P.Anusha, ⁵N.PoornaChary, ⁶B.Rohan Rao
^{3,4,5,6}Final year student Computer Science & Engineering, ^{1,2}Associate professor-CSE
^{1,2,3,4,5,6}Jyothishmathi Institute of Technology & Science, Karimnagar, India

ABSTRACT: Money related problems for instance, tax avoidance, is known to be a veritable method of bad behavior that makes misguidedly procured resources go to fear mongering or other criminal activity. This kind of unlawful activities incorporate complex frameworks of trade and fiscal trades, which make it difficult to perceive the coercion components and discover the features of distortion. Fortunately, trading/trade framework and features of substances in the framework can be created from the mind boggling frameworks of trade and budgetary trades. Trading/trade arrange reveals the relationship among components and thusly anomaly acknowledgment on trading frameworks can reveal the components connected with the blackmail activity; while features of substances are the depiction of components and variation from the norm area on features can reflect nuances of the deception works out. Thusly, framework and features give correlative information to coercion area, which can improve distortion acknowledgment execution. In any case, a large portion of existing methods base on frameworks or features information autonomously, which doesn't utilize the two information. In this paper, we propose a novel distortion revelation framework, CoDetect, which can utilize both framework information and feature information for cash related blackmail area. Similarly, CoDetect can at the same time perceiving cash related coercion practices and the part structures related with the deception works out. Expansive examinations on both made data and genuine data demonstrate the capability and the ampleness of the proposed framework in fighting cash related blackmail, especially for unlawful duty evasion.

Index terms : Irregularity incorporate ID, CoDetect, cash related deception.

1.INTRODUCTION

Starting late, budgetary blackmail works out, for instance, Mastercard deception, unlawful assessment evasion. These activities cause the loss of individual properties. This endangers the security of nation in light of the fact that the advantage from coercion may go to mental abuse. Taking tax avoidance for example, illicit assessment shirking is described as the path toward using trades to move money/stock with the reason for obscuring the veritable origin of advantages. The twisting of costs, sum or nature of stock on a receipt essentially exposes light qualification from typical reason if we use these numbers as features to deliver area plan. In explicit circumstances, this kind of discovery may work very well with commonly stable trading substances. Unfortunately, this present reality situation is progressively jumbled, especially inside Free Trade Zones where widespread trade incorporates complex techniques and exchange of information between trading components. The blackmail works out, specific tax avoidance, are increasingly significant stealth. Illicit assessment shirking activities may take particular structures, for instance, the concealing transportation of cash using trading assignments; the acquiring and closeout of intangibles; and related assembling transactions.

In the wake of delivering feature centers from trades, coordinated and unsupervised systems can be used to perform disclosure. By and large, these data demonstrates are normal be free and unclearly flowed .In any case,the typical for unlawful expense evasion isn't equivalent to attribute regard data. The collectivization lead infers the data is normally associated or mostly associated. Unmistakably, trading activity incorporates no under two business substances. Associated data is clearly not free and unclearly scattered, which invalidates the suppositions of standard controlled and unsupervised strategies. The relations between any business components exhibit thepotential causality that infers, if associations on going, coercion component can be arranged by other perceived deception substance. This suggests the substance, which have relationship with distortion component, are suspicious. With outline mining method, the inadequate structure can be approximated as summation of low-position arrange additionally, inconsistency cross section. The special case system means that suspicious deception works out. Mishandling the outline based mining gives another perspective to blackmail acknowledgment and engages us to do impelled research on distortion recognizable proof. With the distortion practices perceived by outline based revelation framework we can achieve the assurance that few business components drew in with blackmail, regardless, in any case we don't have the foggiest thought how these deception practices are functioned and why these activities named as the separated features of the coercion works out. The greater part of this how-and-why information is merged in features centers, which have fundamental importance for cash related deception acknowledgment because of the accompanying need. For example, working with misdirection of the expense may trade additional a motivating force to exporter. The motivation in this point of reference reveals how did the blackmail happen. This fundamental model requires the area structure to stamp a motivating force as distortion property. Another point of reference, distortion activities may run further stealth with multi -components included. In case a comparable better than average or organization requesting different various business substances to make the portions, by then there are a couple of properties

GENERIC ITEM SET MINING WITH DIFFERENTIAL PRIVACY OVER MASSIVE SCALE INFORMATION

¹V. Malsoru, ²Dr. R. Jegadeesan, ³D. Tejaswini, ⁴V. Shivani, ⁵A. Anusha, ⁶G. Saiteja

^{1,2}Final year Student, ^{1,2}Associate Professor-Computer Science and Engineering,
^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract: Generic dataset mining with differential private indicates to the matter of extracting all-generic object sets whose supports unit of measurement over a given threshold terribly very given transaction dataset, with the condition that the extracted results mustn't violate the security of any single human activity. present solutions for this drawback cannot well balance effectiveness, security, and data usage over massive scale information. Toward this end, we tend to propose associate economical, differential private generic datasets mining rule over massive-scale information. supported the ideas of sampling and human activity truncation mistreatment length conditions, our rule decreases the computational strength, decreases mining reactivity, and so increases data usage given a tough and quick privacy budget. Priliminary results show that our rule gain higher performance than previous approaches on various object sets.

Index Terms : generic item set, Intensity, potency.

I.INTRODUCTION

In previous years, with the explosive growth of data and conjointly the speedy development of data technology, varied industries have accumulated big amounts of data through varied channels. to urge useful data from big amounts of knowledge for upper-layer applications (e.g. business selections, potential consumer analysis, etc.), processing has been developed rapidly. it's created a positive impact in several areas like business and treatment. at the side of the great benefits of these advances, the big quantity info} to boot contains privacy sensitive data, which can be leaked if not well managed. as Associate in Nursing example, sensible phone applications unit of measurement recording the whereabouts of users through GPS sensors and unit of measurement transferring the information to their servers. Medical records are storing potential relationships between diseases and a diffusion of data. Mining on user location data or case history data every offer priceless information; however, they'll to boot leak user privacy. Thus mining data to a lower place assured privacy guarantees is very expected. This paper investigates the thanks to mine frequent itemsets with privacy guarantee for giant data. we tend to tend to have confidence the following application scenario. an organization (such as knowledge consulting firm) incorporates a large-scale dataset. the company would love to create the dataset public so allow the general public to execute frequent itemsets mining for getting cooperation or profits. but because of privacy problems, the corporate cannot offer the primary dataset directly. Therefore, privacy mechanisms unit of measurement needed to methodology the information, that is that the focus of this paper. to make sure privacy of data mining, ancient ways that unit of measurement supported k-anonymity and its extended models .These ways that would like sure assumptions; it's difficult to shield privacy once the assumptions unit of measurement violated. The insufficiency of k-anonymity and its extended models is that there's no strict definition of the attack model, that theTranslations and content mining unit of measurement permissible for tutorial analysis exclusively. Personal use is to boot permissible, but republication/redistribution desires IEEE permission. Frequent Itemsets Mining With Differential Privacy Over Large-Scale data data of the wrongdoer cannot be quantitatively made public.

To pursue strict privacy analysis, projected a robust privacy protection model noted as differential privacy. This privacy definition choices independence of background of the wrongdoer and proves very useful. Frequent pattern mining with privacy protection has conjointly received intensive attention. As preliminary ways that these works have provided many contributions during this house. but with the advance of research, these privacy ways haven't been able to offer effective privacy. so as to beat these difficulties, researches began to focus on the differential privacy protection framework although guaranteeing privacy temporary, however, the balance between privacy and utility of frequent itemsets mining results should be further pursued. In this paper, we tend to tend to propose a very distinctive differential private frequent itemsets mining rule for giant data by merging the ideas of that has higher performance thanks to the new sampling and better truncation techniques. we tend to build our rule on FP Tree for frequent itemsets mining. therefore on resolve the matter of building FP-Tree with large-scale data, we tend to tend to first use the sampling conceive to get representative data to mine potential closed frequent itemsets, that unit of measurement later accustomed notice the final word frequent things within the largescale data. to boot, we tend to tend to use the length constraint strategy to resolve the matter of high world sensitivity. Specifically, we tend to tend to use string matching ideas to urge the foremost similar string among the provision dataset, and implement dealings truncation for achieving rock bottom knowledge loss. we tend to tend to finally add the Marquis de Laplace noise for frequent itemsets to make sure privacy guarantees many challenges exist: first, the thanks to vogue a sampling methodology to manage the sampling error? we tend to tend to use the central limit theorem to calculate a reasonable sample size to manage the error vary. once obtaining the sample size, the dataset is at random sampled using a data analysis toolkit.

TWO FACTOR DATA SECURITY MECHANISM FOR CLOUD STORAGE.

¹V.Nareenkanth, ²Dr. R. Jegadeesan, ³V.Sowmya, ⁴P.Laxmiprasanna, ⁵Dr.S.Prabakaran, ⁶B.Gangajala, ⁷V.Gamana

^{3,4,6,7}Final year Student Computer science and Engineering, ¹Assistant Professor, ^{2,5}Associate Professor-CSE
^{1,2,3,4,5,6,7}Jyothishmathi Institute of Technology and Science, Karimnagar, India

ABSTRACT

Data sharing in cloud storage is receiving substantial attention in information communications technology, as it can provide customers with systematic and beneficial storage services. To ensure the privacy of shared confidential data, cryptographic techniques are generally applied. However, data security so far shows imperative problems in cloud storage to share data. Among them, the basic challenge is how to secure and revoke the cryptographic key. To stop this, we suggest a new data security mechanism for cloud storage that supports the following properties. The cryptographic key is ensured by the two factors. Only if one of the two factors works, the secret of the cryptographic key is maintained. The cryptographic key can be systematically revoked through the combination of proxy encryption and key separation techniques. Data is protected in detail by acquiring the attribute-based encryption technique. In addition, the security review and the execution evaluation show that our advice is safe and beneficial, respectively.

Index terms: two factors, revocability, fine grain, attribute encryption based, proxy re-encryption, cloud storage.

1.INTRODUCTION

The characteristics and advantages, the development and implementation of cloud-based applications have gained enormous motivation in the industry and the research community in recent years. Cloud storage is one of the most successful cloud-based applications, as it matches quite well with the huge demand for data exchange. Huge data exchange with multiple data sharers is a costly task, and the cost on the owner side of the data is directly proportional to the number of data sharers. While this cost could be reduced to the size of the shared data with the help of cloud storage. The only thing the data sharer must do is upload the data to the cloud and grant the right of access to the data sharer. After that, those who share data can get the data from the cloud instead of the owner of the data. Despite the benefits of data sharing in cloud storage, it also presents many opportunities to oppose access to shared data without authorization. To ensure the privacy of shared data, cryptographic schemes are generally applied. The protection of cryptographic schemes comes from the security of the underlying cryptographic key. Currently, the cryptographic key is simply stored in the computer in most existing cryptographic schemes. Although it has been described that stored keys can be revealed by some viruses. To address the key exposure problem, many techniques have been proposed, such as the public key technique with an isolated key and the public key technique isolated with a parallel key. Our knowledge, the exposure of the cryptographic keys and the problems of revocation in the storage in the cloud have not been revealed; proposed a new two-factor data protection mechanism. The cryptographic key is divided into two parts. One is stored in the user's computer and the other is stored in a security device (for example, smart card), which is similar to electronic banking. Only if one of these two parts is kept secret from the opponent, the privacy of the cryptographic key is maintained. Therefore, "factor two" is named. In addition, once the user's security device was lost or stolen, it could be revoked by using the proxy re-encryption technique. While LLS + 15 aims to solve the security problem of data storage, but not the scenario of data exchange in cloud

SEMANTIC CONSCIOUS LOOKING OVER ENCODED INFORMATION FOR DISTRIBUTED COMPUTING

¹L.Sowmya, ²P.Balakishan, ³Dr. R. Jegadeesan ⁴K.Kalyani, ⁵Dr.S.Prabaharan, ⁶M. Harika, ⁷B.Sai
Kiran

^{4,5,6,7}Final year Student Computer science and Engineering, ^{2,3,5}Associate Professor-CSE
^{1,2,3,4,5,6,7}Jyothishmathi Institute of Technology and Science, Karimnagar, India

ABSTRACT

Nowadays numbers of users outsource their data to the cloud. To give the security for data, the data should be encrypted before sending it to cloud because it becomes difficult for the hacker to hack the data which is in encrypted format. For example, it is hard to seek the catchphrases in encoded sets. Various plans are proposed to make mixed data open reliant on catchphrases. In any case, catchphrase based look for plans disregard the semantic depiction information of customer's recuperation and can't thoroughly meet with customers look desire. In this manner, how to design a content-based interest plan and make semantic chase continuously reasonable and context-aware is a hard test. Here the proposed system uses, two cloud servers, one is used to store the re-appropriated datasets and return the situated results to data customers. The other one is used to figure the scores between the reports and the query and send the scores to the essential server. To also improve the look viability, we utilize a tree-based document structure to deal with all the file record vectors. The multi-keyword situated look for over encoded cloud data is used as the basic edge to propose two secure plans. The examination results subject to this present reality datasets show that the arrangement is more gainful than past plans. More over it shows that the arrangements are secure under the known cipher text model and the background model.

Keywords: Accessible encryption, distributed computing, keen semantic hunt, idea order.

INTRODUCTION

It presently gives a detailed depiction of existing issues of accessible plans. Right off the bat, in the phase of separating record includes, the data owner registers the weight of each word in a chronicle and a short time later picks t words with best t stacks as a component of the record. In the process shown up, the two words are different from each other. For example, two words "untruth, lie" are different in spelling but the meaning is same. Besides, making look for

PREDICTING PATIENT ADMISSIONS FROM THE EMERGENCY DEPARTMENT

¹E.Laharika , ²M.Ravindar , ³Dr. R. Jegadeesan ⁴B.Spandana , ⁵Dr.S.Prabaharan , ⁶Ayesha Khanum ,
⁶B.Priyanka

^{1,4,6,7}Final year Student Computer science and Engineering, ^{2,3,5}Associate Professor-CSE
^{1,2,3,4,5,6,7}Jyothishmathi Institute of Technology and Science, Karimnagar, India.

ABSTRACT :

The agglomeration within the emergency departments (EDs) will have important negative consequences for patients. In this way, the EDs explored the use of innovative ways to increase the flow of patients and stop in the crowd. The only possible technique is that the use of data mining using machine learning techniques to predict Admissions to the emergency department. This work uses administrative data collected routinely from the two main acute hospitals of Northern Ireland to combine different machine learning algorithms to predict the Possibility of admission to the emergency service. Here three algorithms are used to create the predictive models: 1) provision regression, 2) decision trees and 3) gradient boosted machines (GBM). The GBM performed higher than the decision tree and also the provisioning regression model. In Provision Regression, we have a tendency to establish many factors associated with hospital admissions, together with the website of the hospital, age, mode of arrival, group of attention of classification category previous admission in the past month, and also in the last year. This article highlights the potential utility of 3 common machines Learning algorithms in the prediction of patient admissions. The practical application of the models developed during this document in decision support tools would provide a complement to the expected admissions of the emergency department at a given moment, which allows the advanced design of resources and also the rejection bottlenecks in the flow of patients, in addition to comparison of expected and actual income rates. Once interpretability could be a key thought, the ED should take into account the adoption of the regression of provisions models, although the GBM will be useful when the precision is preponderant.

INDEX TERMS: Data mining, over Crowding, emergency department, hospitals, machine learning, predictive models, patients.

INTRODUCTION:

The situation of the emergency department will have serious negative consequences for patients and employees, as the waiting time increased, and also the diversion of ambulances, reduced employee morale, adversity Results of patients such as increased mortality and cancellation of elective procedures. Previous analysis has shown that the situation of the emergency department is a major international problem, so it is crucial that area unit of innovative steps taken to address the issue. There is a unit of possible causes of emergency situation of the department in relation to the context, with a number of the main reasons, as well as augmented assistance in the emergency department, inappropriate assistance, lack of different treatment options, lack of patient beds, shortage of emergency personnel and closure of other native emergency departments. The most important of these causes is that the inability to transfer patients to associate with grade patients bed, so it is vital for hospitals to manage the flow of patients and perceive the capacity and demand of Patient beds.

Partitioning and Cloning of Cloud Data for Best Performance and Security

¹V. Neelima, ²Dr. R. Jegadeesan, ³V. Prathyusha⁴ N. Ruchitha, ⁵Dr.S.Prabaharan, ⁶B. Srivani,

^{3,4,6}Final year Student Computer science and Engineering, ^{1,2,5}Associate Professor-CSE

^{1,2,3,4,5,6,7}Jyothishmathi Institute of Technology and Science, Karimnagar, India

ABSTRACT:Cloud computing winds up all well known Technologies among clients. The clients are pulled in towards the cloud because of its offers like on-request organize get to, diminished space, pay-per-use administration, adaptability, versatility and so on. Clients transfer their record on the cloud that contains touchy information, so it ought to be sheltered. storing information in cloud requires higher safety efforts and furthermore enhancement of the information recovery time. Along these lines, the framework approaches the issues of security and execution. In this manner, partitioning and cloning of cloud information for best execution and security is utilized to give answer for the record information security. In this system the documents in the distributed storage are partitioned into number of segments and cloning the divided information over the cloud hub. Every hub stores just a solitary piece of a specific information data. No significant data is uncovered to the assailant even if there should be an occurrence of effective assault. The partition of the data is finished by T-coloring in order to preclude an assailant to figure the pieces area. This approach examinations best recovery time by keeping the number of pieces and number of hubs least.

Index terms : partitioning, cloning, T-coloring

1.INTRODUCTION

Cloud computing is described by on-request self-administrations, universal net-work, asset pooling, versatility, and estimated administrations. Similar attributes of distributed computing make it a putting possibility for organizations, associations, and individual clients for selection. Notwithstanding, the benefits of moderate, irrelevant administration and greater adaptability go with raised security issues. Security is one in all the preeminent vital perspectives among those forbidding the wide-spread selection of distributed computing. Cloud security issues could emerge. For a cloud to be secure, the majority of the participating substances ought to be secure. In some random framework with numerous units, the absolute best dimension of the framework's security is sufficient for the assurance dimension of the weakest substance. Along these lines, in a cloud, the assurance of the advantages doesn't totally depend upon associate in Nursing person's safety efforts. The neighboring elements could offer an opportunity to Associate in Nursing assaulter to sidestep the client's barriers. The off-site learning stockpiling cloud utility needs clients to move information in the cloud's virtualized and shared setting which will finish in shifted security issues. Pooling and physical property of a cloud, allows the physical assets to be shared among a few clients. In addition, the mutual assets could likewise be reassigned to elective clients at some case of your time which will finish in information bargain through learning recuperation strategies. Moreover, a multi-occupant virtualized setting could finish in a VM to escape the limits of the virtual machine screen (VMM). The everywhere VM will meddle with option VMs to have access to unapproved learning. So also, cross inhabitant virtualized arrange access may furthermore bargain information security and uprightness. Ill-advised media purging may likewise spill clients non-open learning. Our real commitments in this paper are as per the following: on a solitary hub must not uncover the areas of different segments inside the cloud. To keep an aggressor dubious about the areas. The information re-appropriated to an open cloud must be secured. Unauthorized information access by different clients and procedures must be averted. As examined over, any powerless element can put the entire cloud in danger. In such a situation, the security component should considerably build an assailant's push to recover a sensible measure of information even after a fruitful interruption in the cloud. In addition, the plausible measure of misfortune should likewise be limited. A cloud should ensure outturn, responsibility, and security. A key issue choosing the outturn of a cloud that stores learning is that the information recovery time. In huge scale frameworks, the issues of data responsibility, information availability, and inertness are taboo learning cloning ways. Notwithstanding, embeddings clones learning over assortment of hubs will expand the assault surface for that accurate information. For instance, putting away m copies of a move into a cloud as opposed to one clone will improve the probability of a hub holding document. From the over dialog, we will find that every security and execution are fundamental for resulting age extensive scale frameworks, similar to mists. Thusly, amid this paper, we together methodology the trouble of security and execution as a protected learning cloning issue. Segments and to more improve the security, we will in general pick the hubs in an exceedingly way that they're not neighboring and are at sure separation from each other. The hub detachment is guaranteed by the proposals that of the T-coloring. To help information recovery time, the hubs are first class upheld the position estimates that ensure AN improved interim. To additionally improve the recovery time, we will in general judicially imitate segments over the hubs that produce the best read/compose demands. The decision of the hubs is performed in 2 stages. Inside the underlying area, the hubs are tip top for the underlying situation of the segments bolstered the position measures. Inside the second segment, the hubs are world class cloning. We will in general execute ten heuristics based for the most part cloning ways as relative strategies to our approach.

Agronomist Self-destruction Dissection and Government Reciprocation

¹Dr. R. Jegadeesan, ²Ch.Rishitha, ³S.Sri Vyshnavi, ⁴ Dr.S.Prabakaran, ⁵D.Priyanka, ⁶K.Prathyusha

^{2,3,5,6}Final year Student Computer science and Engineering, ^{1,4}Associate Professor-CSE

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract:

India is a country where most of the population depends on agriculture either directly or indirectly. As per recent census which was held in the year 2011, 60% of Indians choose agriculture as their livelihood. Now a day's farmer suicides count is 11.2% of all suicides committed in India. The reasons behind farmer suicides are monsoon problems, personal issues policies of the government, financial problems, on the sustainability of seeds, lack of irrigation and family problems. The major problem of farmers displayed worldwide regional, as well as the inter-district difference for this we can go through the problem faced in Vidarbha, showed a severe impact of neglect. In the year 2019 Maharashtra faced extreme agriculture failure with non-agriculture growth. The last Survey which has done by National crime records bureau of India in 2012 has reported 13,750 for farmer suicides. As per previous records from the year 1995 to 2013 the count of farmer suicides is 296,438 and average suicides per year are 16,469. It also focuses response given by the government to farmer's suicides and effectiveness of government policies.

Keywords: suicides committed, National Crime Records Bureau of India, Vidarbha

Introduction:

India is a country where most of the population depends on agriculture either directly or indirectly. As per recent census which was held in the year 2011, 60% of Indians choose agriculture as their livelihood. Now a day's farmer suicides count is 11.2% of all suicides committed in India. Farmer suicide is that which intentionally insert their life because they completely depend on farming as their primary source of livelihood. Many of the Activists Scholars have to summarize many of the problems faced by farmers which led them to commit suicides The reasons behind them are Financial problems, genetically modified crops, government policies, personal issues family problems, Manson problems And many more. As per the survey conducted by the National Crime records bureau of India in the year, 2012 has reported that 13,750 for farmers lost their lives by committing suicides. The highest numbers of farmer's suicides were recorded in the year 2004. As per the historical records in year 1870s there were more taxes on their production so many of the farmers lost their lives by committing suicides. And due to monsoon conditions also many farmers did not gain profits so their financial status has dropped down 1875-1877 of the Deccan riots. In 1879, the British government selected the Deccan agriculturists ' Assistance Act, which was to limit the interest rate collected by money lenders to the Deccan cotton farmers and to serve the interests of British cotton trade. The rates of rural mortality, predominantly agricultural British India, between 1850 and 1940s are high. However, starvation related deaths have exceeded suicides, which are later officially categorized under "Injuries ". The death rate categorized under ' injuries ' is 1897 in 79 per 100,000 people in the central areas of India and 37 per 100,000 in the Bombay Presidency.

SECURE DATA SHARING TECHNIQUE FOR ELECTRONIC MEDICAL RECORD WITH MOBILE DEVICES

¹L. Rachna, ²Dr. CH. Srinivas, ³Dr. R. Jegadeesan, ⁴Amsha Sumcen, ⁵Shaistha Shireen,

⁶N. Sandeep

^{1,4,5,6}Final year Student Computer science and Engineering , ^{2,3}Associate Professor- CSE,
^{1,2,3,4,5}Jyothishmathi Institute of Technology and Science, Karimnagar, India

ABSTRACT To get medical treatment if high quality and efficiently, patients share their Medical Health Record (MHR) digitally on public storage with mobile devices. Nonetheless data privacy protection, flexible data sharing, computation efficiency optimization are some of the obstacles which remaining accomplishing fine-grained access control in Electronic Medical Record (EMR) system. Here, we have come up with an ingenious access control model & fine-grained data sharing mechanism for EMR which concurrently achieves the above-mentioned features & it is relevant for resource-constrained mobile devices. Complex computation is externalized to public cloud server. Having approximately no complex computation left for PKG, sender & receiver with optimized communication cost. Further an extensible library is developed that is appropriate with android devices on realistic environment, access control mechanism along with public cloud servers is deployed with constrained resources. The results indicate that mechanisms is competent, dynamic and practically cost-effective.

Index Terms—Data sharing mechanism, attribute based encryption, secure outsourced computation, cloud computing, Electronic Medical Record.

INTRODUCTION

For digital information processing, EMR enables doctors & patients to conveniently share medical records and personal health information it also assets patients to high quality medical treatment. EMR system can outsource medical records to public cloud where doctors & patients can store manage and share medical records in order to diminish maintenance cost of specialized data centre and to attain data sharing.

Diversified server based access control mechanism like Role Based Access Control (RBAC) [1], Temporal - RBAC [2],[3] and GEO - RBAC [4], have been sharing. A reliable access control server is employed to act as a supervisor. As the records are stored on public cloud, the cloud and user are not in same trusted domain, so conventional access control mechanism may not be suitable for cloud assisted

EFFICIENT DATA AWARE COLLABORATIVE FILTERING FOR LOCATION RECOMMENDATION

¹B.Rani , ² R.Venkateshwarlu, ³Dr. R. Jegadeesan ⁴V.Sindhu , ⁵Dr.S.Prabaharan , ⁶P. supraja ,

⁷Ch . divya

^{1,4,6,7}Final year Student Computer science and Engineering, ^{2,3,5}Associate Professor-CSE

^{1,2,3,4,5,6,7}Jyothishmathi Institute of Technology and Science, Karimnagar, India

ABSTRACT :

Data mining is a procedure to discover designs at costly informational indices that include the intersection strategy of AI measurements and the database framework. The location recommendation helps people find attractive places with social and geographic information, but addresses the problem of cold-start that can appear if we do not have enough information about the element. This is the situation that mostly occurs among new registered users. Due to human mobility, data is shared on social networks. One method is to incorporate them into explicit comments that are widely used in the research field of the recommendation system. They are often informed of the numerical rating of users to express their preferences. A content-aware collaborative filter framework based on implicit feedback in which information is easier to collect. The implicit feedback system performs passive tracking of different types of user behavior, such as purchase history, observation trends and persuasive movement to show user preferences. Do not does not have any immediate contribution from users with respect to preferences. And an efficient optimization algorithm used to scale linearly with the size of the data and the size of the characteristics and develop their relationship with the grafication of the Laplacian grid matrix of regularization. Finally, the data set of social networks based on the large-scale location in which the user profiles and content are obtained was used.

Keywords: Location recommendation, cold-start problem, explicit feedback ,regularized matrix

INTRODUCTION:

As the cities are developing the no. Places, interests such as hotels, attractions and restaurants, offer people more opportunities than ever. People enjoy the neighbor and visit places to their interests. As a result, the location recommendation helps people discover more interesting places and accelerate the familiarization of users with their environment . Location-based social networks such as foursquare, jiepang and yelp make it possible to analyze human mobility data on a large scale, giving credit to

CLASSIFICATION OF PERSONALIZED NEWS TOPICS IN SOCIAL MEDIA USING SOCIRANK

¹V. Sathwika, ²N. Venkateswaran, ³Dr. R. Jegadeesan ⁴B. Sneha, ⁵Dr. S. Prabakaran, ⁶P. Swathi, ⁷K. Ravali

^{1,4,6,7}Final year Student Computer science and Engineering, ^{2,3,5}Associate Professor-CSE
^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract: Social media has experienced growth in today's life. The interactions have been grown between traditional media and social media. As social media being an open source, users exchange unrelated content to achieve importance, that is in the form of likes. For instance, Twitter alone generates 500 million tweets per day, information overload exist, it is important to categorize both media and filter the noise. It is important to find relevant topics in social media. To know, how the influences are made inversely when compared to news media we proposed an unsupervised framework socirank i.e., ranking important topics in social media. The factors taken into consideration to achieve prevalence are, the temporal factors: Media focus (MF) which is important, the temporal factor in social media is user attention (UA) and strength of the group discussing about a topic is user interaction (UI). Based on how the nature of the event considered, volume of activity over time and procedure will affect the quality of filtered topics. This method is proposed to detect the spread of viral topics and also improves the passivity of automatically identified news topics.

Index Terms: social Media, Ranking, News Topics

I. INTRODUCTION

The Mining is the process of extracting valuable information from online sources has become a research area in recent years. Mass media sources provide public of daily events, specifically the news media. The news media sources are able to be trusted because they are published by professional writers. In social media regular users are posting unverified data and expressing their interests.

One of the most popular network site in social media like Twitter, is used by many people, providing large amount of user-created data. This unverified data is useless. The social media used for topic identification. We must find and filter the unverified information and capture only data. The news media, considered as valuable. The news media presents verified data, while social media posting the interests of audience. Unfortunately, after removal of unverified content, there is still information overload in the remaining data.

The news must be ranked based on Media Focus (MF), which is important. Secondly, user interests considered as User Attention (UA). Similarly, the number of users discussing a topic and interaction between the users indicates User Interaction (UI). By using these factors, it is able to rank the news topics. The main use of the paper is to improve the quality of news.

The topic modelling and other topic detection techniques do not rank topics according to their popularity. We propose an unsupervised system to identify topics that are common in both social media and news media, and then ranks them by using degrees of MF, UA and UI.

To achieve its goal, this paper uses keywords and media sources to identify and build a graph. Whose nodes represent keywords and edges in social media. The graph is clustered to identify topics. Then, the factors that are calculated based on their importance: MF, UA and UI. Finally, the topics are ranked by measure that using of three factors. The excess of this paper as: Section II reviews previous research topics. Section III presents overall design and framework. Finally, we provide conclusion in Section IV.

II. LITERATURE SURVEY

Aiello et al. [1] Online social and news media generate events of all categories. Information filtering is needed to find important topics and events by comparing six detection methods on three datasets which differ on time. Based on nature of event, volume and procedure, the preprocessing stage is completed. One of the detection method, based on n-grams co-occurrence and topic ranking, topic detection is done. Jie Tang et al. [2] large social networks like Twitter, users are influenced by others. Due to which social influences arise among them. To address this issue, Topical Affinity Propagation model is used to model influences on large networks. By using this model, social influence of neighbouring users on a particular user is determined. Andriy Shepitsen [3] some applications allow users to create personalized tags like creating uncontrolled words can result in tag repetition. Clustering method is used to remove these problems by identifying important topics. Personalization algorithm is used in which cluster selection is an important step to suggest that topic selection is an important method. Fabian Abel et al [4] Filtering, Searching and analysing information about real world events on web streams is done using a method that is Twitcident. It automatically connects to services and start filtering information from web streams which allow users to retrieve prevalent information. Ding Zhou et al [5] to discover the relationship between documents shared in social networks, we used a method. Generally probabilistic method is used to associate actors. Markov transition matrix method is used to determine social interactions, Topics and also how actors, authors impact these topics and introduce new ways for other impact. J. Ratkiewicz [6] to identify the political Abuse in the social media we proposed a detecting and tracking algorithm with the help of machine learning frame work that combines topological, content-based and crowd source features. Some political individuals and community which are responsible for wide spread of political misinformation is detected at its early stages itself. Daniel M. Romero [7] The information from the social media which

SECURITY PORTRAYAL AND EVALUATION IN INFORMATION DISTRIBUTING

¹B.Shirisha, ²Dr. R. Jegadeesan ³P.Pranitha, ⁴R.Saikumar, ⁵D.Saikrishna, ⁶JaveriaTaj

^{1,4,5,6}Final year Student Computer science and Engineering, ^{2,3}Associate Professor-CSE

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract: The growing ability to track and acquire huge amounts of records with the use of current hardware technology now has led to an activity in the improvement of facts mining algorithms which keep consumer privacy. A recently proposed method addresses the difficulty of privateness upkeep by means of perturbing the records and reconstructing distributions at an aggregate stage in order to perform the mining. Perturbing data is capable to preserve privacy whilst gaining access to the information implicit in the authentic attributes, distribution reconstruction process naturally leads to some loss of information which is appropriate in many practical situations. To manage these concerns, numerous Privacy-Preserving Data Publishing (PPDP) methods have been proposed in literature but they, lack a proper security portrayal and estimation. It initially presents a novel multi-variable privacy, portrayal and evaluation model. In light of this model, by investigating the earlier and back adversarial belief about quality estimations of individuals. The analysis will break down the affectability of any identifier in security portrayal.

At that point, the privacy should not be estimated depending on one measurement. It may lead to security misinterpretation. By the utilization of two different measurements for analysis of protection spillage, distribution spillage, and entropy spillage. Utilizing these measurements, the foremost notable PPDP systems are, for example, k-anonymity, l-diversity, and t-closeness. In view of the structure and the proposed measurements, the discovery of all the current PPDP plans has constraints in security portrayal. The proposed security portrayal and estimation structure adds to better understanding and assessment of those procedures. Thus, it provides an establishment to plan and investigation of PPDP plans.

Index Terms: *perturbing data, security portrayal, protection spillage*

I. INTRODUCTION

For the medical analysis, marketing research and economical measures data sets are considered a valuable source of information. These datasets will embrace information regarding people that contain social, medical, statistical, and client information. Several organizations, firms and institutions publish privacy connected datasets and the shared dataset offers helpful social information to researchers, it also creates privacy considerations and security risks to the people whose information square measure within the table. To avoid identification of individuals from records in advertised data, unambiguously identifying information like names and Social Security numbers are evacuated from the table. whereas the apparent personal identifiers detached from the table, the quasi-identifiers like zip-code, age, gender may still be used.

CAPTURING USER EXPECTATION FOR ACCURATE INFORMATION RETRIEVAL IN PERSONALIZED WEBSITES

¹J. Akhila, ²Dr. R. Jegadeesan ³A. Aishwarya, ⁴E. Sravan Kumar, ⁵G. Sai Krishna, ⁶B. Uma Rani

^{1,3,4,5} UG B.Tech Final Year Students, ^{2,6}Associate Professor

^{1,2,3,4,5,6} Computer Science and Engineering Department

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India.

Abstract

CPSS (Cyber Physical Social Systems) provide high quality, proactive and personalized services for humans. Billions of bytes of data are generated every second in CPSS. General search engines are built to serve all users, but they face difficulties in addressing the needs of user. Capturing user expectation has become difficult especially in personalized websites. Here we are using keyword extraction algorithm for effective search, real-time location and relevant feedback algorithm are used to acquire specific information. Implicit feedback based on click-through data analysis is used. To improve the ranking quality we are designing a personalized page rank algorithm.

Introduction

Cyber physical and social world includes in CPSSs (Cyber Physical Social Systems), these systems provide accurate results for Personal websites. Cyber systems validates the data and acquire information from the human factors in the daily applications. Wiki, crowd sourcing search engines intensify both data-driven and virtualization methods. Using these cyber physical systems intelligence and knowledge can sorted as fast as light travels. Usage of CPSSs has resulted in the rapid growth of networking sites.

To meet the user expectations on internet, many retrieval techniques have been implemented. As users are familiar to general search engines to gain information from internet through general engines like google, yahoo. But results often contain unnecessary information and unwanted data that is hidden back of a webpage. This lead to time consumption and it is hard to retrieve information more accurately and satisfy user intentions.

We use keyword search technique to reclaim information present in personalized website. This method looks for the queries that are specified by the user. But different users may get information on different aspects when they submit the same query.

Various data mining techniques such as keywords-based, vertical search, multi keywords queries have been extensively employed to retrieve information. Vertical search engines provide certain information, but the information contain some noise data and detailed information is not obtained.

However, the retrieve result contain some amount of unnecessary information and some required information can be hidden back of the webpage. So users need to spend a lot of time to retrieve accurate information. These vertical search engines will not provide satisfactory results to the user.

The main contributions of this paper are summarized as follows:

- we use real-time location strategy
- we use implicit relevant feedback based on click though data analysis
- To improve the ranking quality, we design a personalized page rank algorithm.

II. RELATED WORK

One of the main purpose of CPS (Cyber Physical Systems) is to provide high quality, energetic and personalized services for humans. CPS is supervised by computer based algorithms [1]. Significant enhancement in human living environment is due to rapid advances in information and communication technologies. These information are high dimensional, redundant and noisy, resulting in unrivalled challenges for providing big services in ELEs [2].

CPS are still at their dawning, most recent studies are application-specific and lack of systematic design methodology. To outline future challenges for designing CPS, it introduced latest research improvement on systematic design methodology [3].

Reference [4] presents the outcomes of experiments designed to evaluate the performance of a Real-time Interest Model (RIM) that attempts to identify the dynamic and changing query level interest regarding social media understanding.

This study accord a better understanding of how dwell time can be used as implicit evidence of document usefulness, as well as how contextual factors can help interpret dwell time as an indicator of usefulness. For development of personalized system these findings have both theoretical and practical implications [5].

To enhance the efficiency of information retrieval, researches had put great effort on it. This information retrieval is based on keyword search. Single keyword is considered only in current research work but expanded research work use multiple keyword search is require to process the search request and document return by means of its keyword search [6].

Many of the vertical search results are valid to users in only a short period of time. TSVS (Time Sensitive Vertical Search engine) prototype focused on time critical air force discount information search to investigate the time critical requirements of vertical search and a QTC (Query Triggered Crawling) strategy to solve this problem [7].

The order of top results in a web search can be enhanced by incorporating user behaviour data. The accuracy of web search can be improved by incorporating implicit feedback [8].

GENERATING HIGH UTILITY PATTERNS FROM LARGE DATA SETS USING REDUCED TRANSACTION PATTERN LIST

¹S.Srilekha, ²Dr. R. Jegadeesan ³M.Amulya, ⁴Ch.Anil, ⁵G.Mahesh, ⁶G.Srilatha

^{1,3,4,5,6} U.G.B.Tech Final Year Student

^{2,6}Associate Professor-Department Of Computer Science and Engineering

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science,Karimnagar,India

Abstract : The frequent item set mining will not address both the quantity and profit of the item sets. The high utility itemset mining is an emerging area of mining which considers and addresses the quantity and profit of the item sets in the database. High utility itemset mining is done efficiently by using the SPHUI-Mining algorithm, which reduces the time and space complexity by using the reduced transaction pattern list (RTPL) and projects the reduced transaction pattern list. Selective projections of the database used in the SPHUI-mining algorithm plays a major role in reducing the scanning time of the database, which makes the approach more effective. Most challenging part of the HUI mining is the exponential complexity in both time and space. HUIM is used in wide range of applications, such as the analysis of clickstream on websites, mobile computing, finding top-k itemsets and biomedical applications.

Index Terms: Data mining, frequent itemset mining, high utility mining, database projection.

I.Introduction

Data mining is a prominent and important research area for extracting the information contained in large databases. Discovering patterns hidden, unexpected trends in the data is the primary goal of the data mining.

An essential function in several data mining tasks, such as frequent pattern mining, weighted frequent pattern mining and high utility pattern mining, is to discover the useful patterns hidden in a database.

The sets of items that appear frequently in the transaction are called sets of frequent items. Identifying all sets of frequent items in a transaction data set is the goal of frequent mining. Support value of the itemsets is the criterion of being frequent. The number of transactions that contain the item is termed as the support value. The frequent itemsets are generated by considering the minimum support value. The frequent itemsets are generated from itemsets the which satisfies the minimum support value.

Generally, during the mining process, our aim should not be to identify frequent itemsets but our aim should be to identify itemsets which are more utilizable to us. Thus, a new approach in data mining which is based on the concept of itemset utility called as utility mining is proposed. A utility based mining approach, gives flexibility to the user to express their perspective for the usefulness of as utility values and then find which have higher utility values than the threshold.

This approach has been proposed as the limitation of frequent mining motivated the researchers. The frequent item-set mining follows the downward-closure property where the support value of an itemset is anti-monotonic. Anti-monotonic is defined as the subsets of a frequent are frequent and supersets of an infrequent are infrequent, which is an efficient property to trim the search space. As high utility may have a super set or subset with lower, equal or higher utility, the HUIM does not follow monotonic or anti-monotonic properties. So, as to prune the search space in HUIM, a compact data format named high utility-reduces transaction pattern list(RTPL) is generated with the help of the transaction bitmap matrix(TBM).

AVOIDING PRIVACY LEAKAGE TO CLOUD SERVER WITH PRIVACY PRESERVING TO SQL QUERIES

¹Asma Mohammed, ²Dr. R. Jegadcesan ³G.RanjithKumar, ⁴M.Ragini, ⁵N.Sruthi, ⁶N.Rasagna

^{1,4,5,6} B.Tech Final Year Students, ^{2,3}Associate Professor Dept of CSE

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology & Science, Karimnagar, India.

Abstract: Recent days, outsourcing database to cloud is getting popular as cloud provide services and applications which are in low cost and available even for small scale industries. There are different schemes to provide appropriate functionality for the queries over the outsourced database. Though, presence of such schemes provide sufficient functionality, the privacy may get leaked to the cloud which is providing service due to the frequent query search over the outsourced database as it is in total control of cloud server. When we consider numerical range queries, they cannot have secure schemes which can leak their statistical properties as well as access patterns which is an important practical challenge. To avoid this privacy leakage, this paper provide a multi cloud scheme by dividing the knowledge into these clouds, which is efficient enough to provide security to outsourced database and to numeric range queries over database.

Index Terms – database, cloud computing, range-query.

1. INTRODUCTION

Cloud computing involves services over the internet. It has services like IaaS, PaaS, SaaS[1]. One can outsource the data to the cloud and can view whenever the user desired. computing saves the cost, provides security, flexibility etc[2]. Cloud has a privacy issue that, the service provided by the cloud is assumed to be semi-trust i.e., the cloud is honest but curious. As the cloud is assumed to be semi-trust, the data of the of the data owners is at risk. So, a technique called encryption should be done to the data before outsourcing to the cloud.

An overview for outsourced database is explained in cryptDB[3]. Consider any cloud client like software company. The private data has to be send to the cloud and can be accessed using DDL, DML, DQL, DCL commands[5]. As we have assumed that the cloud is semi-trust, there is a chance for the cloud to get any private information for the advantage of the company. In some worst situations, there is a chance for the cloud to leak the private information to the opponents for profit which is illegal.

The privacy can be stored irrespective of the cloud. The confidential data is divided into two parts and distributed into two non-colluding clouds. The implementation of divide and conquer method can know any confidential information from single part of knowledge and each cloud will have idea about it's own part. A secure two cloud database architecture is introduced where the clouds are non-colluding and both the clouds have idea about it's own part. By taking this architecture into consideration we further recommend a series of interaction protocols which are the communication scenario between individual agents in multi-agent[10] systems. For a client to conduct numeric related query over enciphering data from faraway cloud servers. It involve query statements such as greater than, less than, between etc.

1.1 MOTIVATION:

Providing and preserving security is a key factor in cloud. In modern days, everyone is concentrating on privacy issues as it is the major risk. Even though there are many schemes regarding the privacy, there are some chances to leak the private data. Many organizations and enterprises are facing these problems. If the private data of any organization or enterprise got leaked, then it has to face many problems. The goal is to provide security for the data which is stored in cloud.

2. RELATED WORK

Due to the increasing popularity to retrieve data with similar(not only same indexes) the fuzzy searchable encryption [11] introduced in many literatures for cloud computing. These search techniques allows small- scaled distinction in character or numeric level in search keywords. More importantly for numeric keywords, the predicate of query can get numeric records with in range. Some existing range query schemes due to large storage overhead to maintain the encrypted data is not suitable for practical.

Subsequently, to provide numeric related range query in database the scheme like Order Preserving Encryption (OPE) [4] is introduced. The OPE preserves the order of values in encryption field, while hiding the actual values OPE developed to increase both efficiency and security. In Ideal security OPE scheme [4], an adversary even having the access privilege to a set of cipher text. It can not learn the knowledge of the data with non-negligible advantage. In order preserving encryption scheme [4],[6], though it is achieved the security boundary it does not totally satisfy the privacy requirement as it exposes the order of data which OPE store inherently, this may be utilized to reveal the some amount of sensitive data.

In Security and privacy enhancing multicloud architecture [10] explained a architecture of cloud which or protect the sensitive information of outsourced databases and services. This mainly concentrated on the four knowledge partition patterns (1) Application Replication (2) Division of application logic (3) Fragmentation of application logic (4) Fragmentation of application data. Here, The knowledge is divided in to two fragments and stored in two different clouds which is non-colluding an each cloud knows only its respected fragmented knowledge the cloud can not get any private information in such type of multicloud architecture.

RECOGNIZING STRESS IN SOCIAL NETWORKS

¹H.Bhavana, ²Dr. R. Jegadeesan ³P. Vinitha, ⁴K.Rajkumar, ⁵B.HarshaVardhan, ⁶R.SatyaTeja

^{1,2,3,4} B.Tech Final Year Students, ^{2,6}Associate Professor Dept of CSE

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology & Science, Karimnagar, India.

ABSTRACT:

Psychological Stress and Depression are considered repeatedly as important problems to the weakening of physical and mental state. Stress is taken into account because the biggest threat to individual's welfare. However stress is a positive side in our everyday life, however an excessive amount of stress will somewhat be harmful to physical and emotional physiological state wherever as managing it, is a major concern for populations around the world. Hence, there's great importance to observe stress in its early stages, before it turns into severe downside. Thus, this work analyses and brings along recent analysis studies carried for automatic stress detection perceptible over the scale dead on the four main modalities, viz., Psychological, behavioral and Social Media Interaction modalities, in conjunction with acceptable measurements, so as to allow hints concerning the foremost acceptable ways in which and it suggests that to be used for Psychological Stress Detection

I. INTRODUCTION

Psychological stress refers to the psychological awareness of affliction and the body's response to it. Hans Selye was the first person to give definition of Psychological Stress and credited as being father of stress who defined stress in the year 1936 as "the non-specific response of the body to any demand for change"[1]. In 1979 he further expanded his definition stating, "Stress is a 'perception', it is the demands that are imposed upon us because there are too many alternatives". Further, stress exists in two forms namely Acute stress and Chronic Stress Acute stress is short-lived stress exists for time being for which human body designed to recover from it. It's an instant reaction of body to new challenge or demand that activates instantly like a fight-or-flight response. This can be seen from instances such as fight with closed relation, an accident or anxiety when meeting new people. Such stress is said to be episodic type if it happens frequently. Chronic stress is one, when acute stress isn't resolved and begins to increase continuously and persist for long-term. It is considered as negative. Instances of such stressful circumstances are difficulties in interpersonal relationships, bad job, abuse and poverty. The Chronic stress leads to numerous serious health problems such as heart disease, cancer, mental problems and suicide [3].

Stress and Depression have been pinpointed again and again as significant issues contributing to weakening of mental health and class of life. However, stress can be a positive aspect for motivation and achievements. At times, too much stress can be rather harmful to physical and mental health conditions. Such as depressions, insomnia and even suicide accordingly as per statistical reports of World Health Organization (WHO) over 4.5% of India's population suffer from depression as of 2015. Whereas the corporate sector in India has reported an ascending increase of stress over the last two years. Similarly, a survey by workplace solutions provider Regus in 2015 also reported 57% of corporate India is under stress. Thus, the increase of stress has become an adverse affect on human health as per survey. Concern of health is essential for growth, development and productivity of society and is vital for a happy and healthy life in the world. Thus, there is a significant necessity to predict stress in its early stages, before it turns into severe problem. There have been many techniques developed to detect stress with the aid of data collected using physiological sensors or face-to-face interviews conducted by psychologists, which usually relies on the active individual participation hence it becomes non-trivial to detect stress timely for proactive care. With the rapid development of social networking sites (SNS), it has become a popular platform for people to express themselves. Nowadays, people are more willing to use social media as a platform to express their moods and daily life events. A Facebook's statistical report from Global social media research of 2017 shows that most popular social networks with total 1,871 million active users worldwide whereas Twitter is the fastest growing social networks with total of 317 million active users [2]. People post text, emoticons and images on social media platforms to share thoughts, express emotions, record daily habits and interconnect with friends. The observation shows that microblogs of linguistic text and visual content indicates stress related symptoms are used in social media to express their thoughts. Encoding of emotional information in text is common practice especially in online interactions.

This makes the detection of user's psychological stress through their tweets, posting behavior and social interaction from microblog or social media feasible. As studies suggest that the way of a person's write-up give windows into their emotional world [2], without nonverbal signs, writers become accustomed to the medium by permeating messages with emotion prompts e.g., emotion words or emojis to will allow for more natural or improved Communication (Walther, Loh, and Granka, 2005). This paper

A SYSTEMATIC AND SECURE DEDUPLICATION SCHEME FOR CLOUD ASSISTED e-HEALTH SYSTEMS

¹A.Bhavani, ²Dr. R. Jegadeesan ³A.Shwetha Sri, ⁴G.Anjali, ⁵G.Sai Teja, ⁶K.Mahesh Raj

^{2,6}Associate Professor - of Jyothishmathi Institute of Technology and Science

Dept of CSE,

JYOTHISHMATHI INSTITUTE OF TECHNOLOGY & SCIENCE, KARIMNAGAR, T.S., INDIA.

ABSTRACT:

The widespread use of Electronic Health Record (EHR), and building a secure EHR sharing environment has attracted a lot of attention in both the academic community and health care industry. The Cloud computing paradigm is one of the most popular health IT infrastructure for facilitating EHR sharing and EHR integration. Privacy into mobile healthcare systems is built with the help of the private cloud. The desire to protect privacy is in part an outgrowth of a common human wish to live free of encroachment, judgment, inferiority complex. This technique provides important characteristics like privacy-preserving data storage and retrieval and audit ability to avoid miss using of health records. In this, we search over encrypted data thus hides access and search patterns. Searchable symmetric algorithm and elliptical curve cryptography are used here.

I. INTRODUCTION

The widely deployed electronic health (e-Health) system has changed people's daily life for its extraordinary advantages, such as more efficiency, high accuracy, and broader availability. Whereas, privacy concern is arguably the major barrier that hinders the development of the EHR stored in public storage with a direct connection to a network. For most e-Health systems, physicians periodically upload their observations and diagnosis to one particular store, where the Protected Health Information (PHI)[1] is seamlessly bound to the real identity of a specific patient. When physicians are authorized, they can easily obtain both the real identity and designated diseases of a particular patient, which apparently discloses the patient's privacy. To some extent, patients are reluctant to contact a doctor or a medical facility based on the real identities, instead, they prefer to show a token which can represent their diseases or other attributes rather than exposing real identities, and physicians can treat them using the token only. This perfect solution leads us to separate attributes from identity, which brings several open problems related to the system architecture.

First, if the authentication process takes place on centralized authority, even if the identity is isolated from the corresponding attributes, it still needs to disclose certain information regarding the relationship between attributes and identity to the authority for verification, so that the centralized authority can process requests and grant privileges to the designated user. On the other hand, if users directly communicate without the help of a central authority, it can guarantee that the privacy issues related to attributes are well preserved[2]. However, purely relying on the distributed user's attributes cannot fulfill the requirement of verifiability of the isolated attributes. In a word, existing e-Health systems lack the ability to satisfy the requirements of preserving the privacy and the verifiability of the corresponding attributes simultaneously. As a result, patients face those security breaches and authentic verification problems when they share the same situation and want to talk with each other via cyber-space. Furthermore, those kinds of concerns become the major barrier that impedes patients from easily communicating. Thus, there is an urgent need for designing a framework where users can authenticate each other using verifiable attributes while keeping their attributes and identities undisclosed[3].

Fast access to health data enables better healthcare service provisioning, improves quality of life, and helps to save a life by assisting timely treatment in medical emergencies. Anywhere-anytime-accessible electronic healthcare systems play a vital role in daily life services supported by mobile devices, such as home care and remote monitoring, enable patients to retain their living style and cause minimal interruption to their daily activities. In addition, it significantly reduces hospital occupancy, allowing patients with a higher need for in-hospital treatment to be admitted. Private cloud introduced which can be considered as a service offered to mobile users. Mobile users outsource private cloud data processing tasks that store the results processed on the public cloud. The cloud-assisted service model supports implementing practical privacy mechanisms as intensive computing and storage can be moved to the cloud, leaving mobile users with lightweight tasks. The electronic health care systems are dominantly increasing day by day as large amount of personal data for the medical purpose are involved and once the health record is exposed to cyberspace it becomes vulnerable to the outside world. According to a survey of government website [4], around 9 million patient's health record was leaked in the past three years. Despite the highest importance, privacy issues are not addressed efficiently at the technical level and efforts to keep health record secure have often fallen short. Automated decision support algorithms in mobile health monitoring [5] which is cloud-based was considered a future trend. Unfortunately, the cloud-assisted

PUBLIC HEALTH MONITORING ON SOCIAL NETWORKS

¹L.Greeshma, ²Dr. R. Jegadeesan ³M.Jahnavi Rao, ⁴M.Sindhu, ⁵Y.Chandralekha Rao, ⁶G.Sindhusha
^{1,2,3,4}UG B.Tech Final Students ^{2,6}Associate Professor - Computer Science and Engineering Department,
^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India.

ABSTRACT:

With the movement of life online, an impressive number of individuals routinely give their behaviors, inclinations and well-ordered battles with mental success problems through methods for electronic media frames in the media stages of the organization such as Twitter. In no way, as the standard observer-observer evaluators conducted through self-developed surveys and surveys, did we investigate the reliable revelation of the clinical misery of subtly collected tweets. In the context of the examination of tweets from clients with problematic autodemolent signs in their Twitter profiles, we show the potential to see clinical sadness responses that duplicate the PHQ-9 scheme currently used by physicians. Our survey uses a genuine semi-guided model to study how the reach of these signs and their appearance on Twitter (the extent to which wordplans and topical propensities) are aligned with point-by-point support revelations using techniques for the PHQ-9. Our proactive and adjusted detection instrument can perceive problematic clinical responses with an accuracy of 68% and a precision of 72%.

Keywords: Semi-supervised Machine Learning, Natural Language Processing, Social Media, Mental Health

INTRODUCTION

Most of the effort to manage the ruin cables that are seen in the dark through the systems based on graphs by telephone strategies or online questionnaires. In any case, these exams experience the perverse effects of underrepresentation, research trends and insufficient information. In addition, brief openings between aggregation of data and dispersion of disclosures may delay the relation of advantageous and appropriate therapeutic measures. The dynamic tendency, which protects individuals from giving sensible answers, is an increasingly unmistakable impediment [1]. In particular, Twitter is a productive resource to find a couple of fixes with respect to the evaluations, inclinations, practices and decisions of the clients that reflect their burgeoning enthusiasm, as they are experiencing the ups and downs. For example, the news highlights, for example, "Twitter loses the brand: Teen sent 144 tweets before committing suicide and No One Helped" and "The girlfriend of Jim Carrey: his last tweet before committing suicide 'turning off'", show the Flood of a vigorous disturbing Impacts on tweets and on careful exercises in the physical world [2].

Starting late, much advancement has been made in considering outlook and vivacious flourishing through online life content. These examinations can be requested in two basic gatherings; explicitly, vocabulary based, and facilitated. These examinations proposed the individual's language style, feeling, still, little voice structure, and customer commitment to withdrawing features to see debilitation expressive posts. Notwithstanding, the word reference based strategies the clever experience of low audit and are amazingly subject to the likelihood of the made vocabulary. Of course, composite methods require work raised remark of an enormous dataset. Additionally, encountering clinical devastating is more than penchant down for a couple of days [3]. Clearly, clinical sad is examined through a great deal of predefined signs which prop up for a fixed period.

Revitalized by this, we developed a real model that reflects the standard observational considerations that associates created through online audits by easily clearing, organizing and verifying the distinctive signs of sadness by appearing as a substance in electronic as a mixture of safe approaches that reserve a few minutes. As far as anyone is concerned, this is the essential thinking about the cables that pass the examination of the substance developed by the client by means of strategies for the means of the association of online systems to obtain these undeniable signs. We tracked 23 million tweets posted by more than 45,000 Twitter clients who self-discovered harsh reactions in their profile descriptions [4].

We consider the misery segment transmitted in the tweets for each client profile in our data set by organizing a structure based on word references (from top to bottom, preparing) with a data-based strategy (base supervision). Using the clinical verbalization of misery, we developed a discouraging vocabulary that contains regular appearances of hopelessness from the PHQ-9 facility clinical examination audit [5]. We classify the terms and assemble a quick review of the terms of the edifying vocabulary for each one. client and use them as initial terms to discover inert approaches (desperate reactions) studied by the subject in their tweets (base prepared). We developed a probabilistic theme that appears in the tweets of the clients without supervision (through the use of meetings sown), called semielaborated point that appears some time (ssToT), to detect debilitating clinical reactions. We apply ssToT to interpret the diffusion by client point (load signs) and the dispersion per word of the subject to detect and select an instance of signs after some time.

The basic commitments of this multidisciplinary are, arXiv: 1710.05429v1 [cs.CL] October 16, 2017, created by a social event of PC scientists and avid professionals on the rise. It is likely to appear in the substance made of injured individuals; Secondly, we developed an obvious semi-managed model to clear, classify and detect distress reactions for a constant transient examination of an individual's tweets. The test evaluations show that our model is superior to five baselines insofar as astute approaches are likely to occur (devastating clinical appearances) [6].

A COMPARATIVE STUDY ON DETECTION OF LUNG TUMOR USING VARIOUS IMAGE DATA ANALYSIS AND CLASSIFIER METHODOLOGIES

¹A.Jahnavi Reddy, ²Dr.R.Jegadeesan ³P.Pranitha, ⁴B.Sindhujha, ⁵B.Manoj Kumar, ⁶V.Arun,

^{1,4,5,6}Final year Student Computer Science and Engineering, ^{2,3}Associate Professor-CSE

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract-- Image processing techniques are currently commonly utilized in the therapeutic field for early detection of infections. This exploration expects to improve exactness, affectability, and explicitness of early detection of lung disease through a combination of image processing techniques and data mining. The Computed Tomography (CT) filter image of the lungs is pre-handled and the Region of Interest (ROI) sectioned, held and compressed utilizing a DWT (Discrete Waveform Transform) strategy. The subsequent ROI image is decomposed into four sub frequencies, groups LL, HL, LH, and HH. Once more, the LL sub recurrence is decomposed into four sub-groups, applying a 2-level DWT to the ROI based image. Further, highlights, for example, entropy, co-connection, vitality, change, and homogeneity are extricated from the 2-level DWT images utilizing a GLCM (Gray Level Co-occurrence Matrix) with characterization affected by methods for an SVM (Support Vector Machine). Order distinguishes whether the CT image is ordinary or carcinogenic. The Lung Image Database Consortium dataset (LIDC) has been utilized for preparing and testing reason for this examination. A Receiver Operating Characteristics (ROC) bend is utilized to break down the execution of the system. By and large, the system has a precision of 95.16%, affectability of 98.21% and explicitness of 78.69%.

Index Terms-- Computer Aided Diagnosis System, optimal thresholding, gray level co-occurrence matrix (GLCM), Support vector machine (SVM) Receiver Operating Characteristics, Computed Tomography.

I. INTRODUCTION

Lung malignant growth has become a standout amongst the most common reasons for disease in the two people. A substantial number of individuals pass on consistently because of lung malignancy. The ailment has diverse stages whereby it begins from the little tissue and spreads all through the distinctive territories of the lungs by a procedure called metastasis. It is the uncontrolled development of undesirable cells in the lungs [1]. It is assessed that around 12,203 people had lung malignancy in 2016, 7130 guys and 5073 females; passing from lung disease in 2016 were 8839.

Biomedical image processing is the most recent rising device in medicinal research utilized for the early detection of malignant growths. Biomedical image processing techniques can be utilized in the therapeutic field to diagnosis infections at the beginning time. It utilizes biomedical images, for example, X-beams, Computed innovation and MRIs [2]. The principal contribution of image processing in the therapeutic field is to diagnosis malignancy at the beginning time, expanding survival rates [3]. The time factor is basic for tumors of the cerebrum, the lungs, and bosoms. Image processing can recognize these tumors in the early periods of the ailments encouraging an early treatment process. The image processing system consists of four essential stages, pre-processing, division, highlight extraction, and order. This paper presents image processing techniques whereby the CT check image is utilized as the information image is prepared and beginning period lung malignant growth is identified utilizing an SVM (support vector machine) calculation as a classifier in the characterization arrange to improve precision, affectability, and explicitness. To start with, the image is preprocessed and fragmented. After that highlights are extricated from the fragmented image lastly the image is named typical or dangerous.

Dougherty [4] has brought up that biomedical advanced images have opened a promising test field for the diagnosis of infections. This investigation is critical in that it applies this biomedical computerized image processing system to the diagnosis of knobs on the lungs. This examination is likewise noteworthy on the grounds that it goes for most extreme adequacy from the vital arrangement of techniques at various stages. Besides, SVM is utilized as a classifier to distinguish early lung malignant growth to improve the exactness and affectability of the system in inclination to other machine learning dialects. SVM utilizes 'bit trap' to exchange data and to locate the conceivable yield yielding higher exactness than other machine calculations. At long last, the examination is likewise marked through its investigation of all techniques of image processing of biomedical images for identifying knob in the lungs by improving the CAD yield.

II. LITERATURE REVIEW

In this paper [1] a summed up methodology is talked about for lung malignant growth detection utilizing CT check images of the chest. According to this paper, a computer-aided lung malignant growth detection system includes three fundamental processing stages: upgrade, division, and highlight extraction. Further, these stages are clarified in detail with every

SECURED AND EFFICIENT CLOUD COMPUTING FRAMEWORK FOR MOBILE

¹B.Krishnaveni, ²Dr. R. Jegadeesan ³B.Sriteja, ⁴G.Rajender, ⁵B.Sai Kiran, ⁶N.Venkateswaran
^{1,3,4,5}B.Tech Final Year Students ^{2,6}Associate Professor - Computer Science and Engineering Department,
^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, Telangana, India.

Abstract: Cordless phone machines are used in our daily lives. However, these machines have drawbacks such as unreliable network connectivity, limited size memory, low computing power and a short battery life. These many solutions proposed to modify these drawbacks and extend the life of the battery using the discharge technique. In this document, a novel architecture is proposed to download detailed computing tasks from mobile devices to mesh computing. This architecture is used as a development model to determine the download resolution dynamically according to four parameters, memory usage, power consumption, execution time, CPU usage. In this, the current security layer is provided to protect the transferred data in any attack of the mesh computing. The practical results showed that the architecture can select a download resolution solution for different types of mobile applications while improving performance.

IndexTerms: Smartphones, Security, Optimization of particle swarm, Download of computation.

I. INTRODUCTION

The cordless phone provides a large number of applications such as speech recognition, video games, video processing, image processing, face detection and augmented reality. These applications are heterogeneous and the application to determine resources is increasing. However, in the face of progress in wireless phones, the main challenge is the scope of the battery life: improve the calculation requirements through the increase of the battery.

Mesh computing includes many technologies, protocols, platforms and infrastructure elements; This complete note is just what you need if you are going to use or apply mesh computing. It allows access to infinite capacity through the internet. Mesh computing offers many advantages, such as ease of use, self-service provisioning, elasticity, low costs, pooling of resources and broad access to the network.

The base of the mesh computing is the capacity of processing through Internet, increasing the storage, providing flexibility and mobility of the information, automating systems, it is proposed decoupling the service to affect the inconveniences of the wireless telephone devices.

II. LITERATURE SURVEY

In the condition of distributed computing, it is especially genuine, given that the information is in better places even in the whole world. The security of information and the guarantee of protection are the two fundamental elements of the client's concerns about innovation in the cloud [1]. In addition, the equipment assets of each cell phone also change generally, which causes several encounters with customers of cell phone customers [2]. The methods of calculation of development, hereditary calculations, transformation techniques and computer programs of hereditary writing are inspired by the advancement of nature [3], the continuous advances in computing in the mobile cloud. Call for Papers mobile phones such as cell phones, workstations, tablets, PC, etc. They have been redesigned, step by step in the market and have become a fundamental requirement for all [4]. In the writing of the severity of mishap examination, there are two main weaknesses: most investigations use the accuracy of the arrangements to quantify the nature of a classifier that does not fit into the unequal data set state [5]. Today users become more demanding and expect to run computational. Intensive applications in their smartphone devices [6], cloud computing is a virtual set of computing resources, confidentiality, integrity and availability are essential concerns for both cloud providers and consumers [7].

The computing and storage capabilities of today's mobile devices are rapidly reaching those of our traditional desktop and server computers [8]. Mobile cloud computing aims to use cloud computing techniques for the storage and processing of data on mobile devices, which reduces its limitations [9]. This mechanism allows mobile users to enjoy secure external data services with a minimized security management overhead [10]. Mobile cloud computing is a combination of three main parts: mobile devices, cloud computing and mobile internet with the help of mobile cloud computing [11]. The main advantage of cloud computing is that the user only uses what he needs and only pays for what he really uses [12].

Nowadays, each organization has its own cloud where the data related to its work is stored and whenever it is necessary [13]. However, even as technology continues to attract more users, certain aspects of mobile cloud computing are relatively difficult for users and developers [14]. But still, its disadvantage in the PSO is that it stayed at the local minimums. To improve the performance of PSO they proposed [15].

EFFICIENT DECISION MAKING IN SMART SYSTEMS USING WEIGHTED FREQUENT ITEMSET MINING

¹Ch.Supriya, ²Dr. R. Jegadeesan ³R.Rakesh, ⁴Ch.LikithaReddy, ⁵V.Rishwanth, ⁶S.Prabakaran
^{1,3,4,5} B.Tech Student

^{2,6}Associate Professor -Computer Science and Engineering Department
^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India.

Abstract: Making good selections is that the key technology of this generation systems. We use downward closure property for the weighted frequent itemsets and therefore the existence property of weighted frequent subsets are introduced and proved initial. Based on these two properties, the Weight judgement Downward closure property primarily based Frequent Itemset Mining (WD-FIM) algorithm is planned to slender the looking house of weighted frequent itemsets and improve the time potency. Moreover, the completeness and time potency of WD-FIM algorithmic program square measure analyzed theoretically. Finally, the performance of the planned WD-FIM algorithmic program should be proved on each artificial and real-life datasets

INTRODUCTION

Intelligent decision - making is the key technology for smart system. In decision - making activities, data mining technology has played an increasingly important role. As one of the hottest research topics in data mining, FIM (Frequent Itemset Mining) is an important approach to discovering association rules in datasets, widely used in precision marketing, custom recommendations, network optimization, medical diagnosis, and so on. However, with the rapid development of data acquisition and data processing technologies, different forms of complex data have emerged, such as uncertain data. Uncertain data means that a probability or probability measure is used to describe an item in a transaction.

The primary disadvantage is that the dataset size would be a lot bigger because of the likelihood of presence being stored. Another drawback is that there will be more complicated and time consuming mining algorithms for dubious databases. Consequently, as of late, the improvement of successful mining algorithms for uncertain databases has turned into a hotly debated issue of research. Numerous algorithms were created in dubious databases to mine frequent itemsets. Most existing investigations accept a similar significance is joined to all items in dubious databases. As a general rule, however, the values and imports of different items are usually different from users. For instance, it is difficult to specify the benefits of expensive luxury goods and modest living products at the same moment. Therefore, mining is inadequate to recognize useful and meaningful patterns based on only occurrence frequencies or probabilities of existence without taking into account imports or values of items.

Prominent solution to address this issue is to allow users to allocate different weights to items to indicate their relative imports or values. Users can set the weight of items to indicate profits, risks, costs and so on based on their professional domain knowledge or specific application requirements. In this context, user-friendly itemsets will be discovered. In addition, weight introduction of items can significantly reduce the number of frequent itemsets. However, as items are assigned different weights, the downward closure property used for mining frequent itemsets in uncertain databases would no longer hold. This means that there may be a frequent superset of an infrequent itemset. As a result, according to the downward closure property, the search space can no longer be narrowed, resulting in low time efficiency of FIM algorithms. In this paper, the Weight judgment Downward closure property based on Frequent Itemset Mining (WD-FIM) algorithm depends on the weight judgment downward closure property to limit the search space for weighted frequency itemsets and improve the time effectiveness. In this way, it is conceivable to find more useful and meaningful weighted frequent itemsets in dubious databases. It presents and demonstrates the weight judgment downward closure property and the existence property of weighted frequency subsets for unsure databases. The downward closure property weight judgment can be utilized to limit the search space for weighted frequency itemsets. Weighted frequent subsets existence property can guarantee that all weighted frequent itemsets are found. The WD-FIM algorithm utilized to restrict the search space of weighted frequent itemsets and improve the time proficiency dependent on weight judgment downward closure property.

LITERATURE SURVEY

Weighted support and significance framework [1] does not satisfy "downward closure property". These can be improved by a property called "weighted downward closure property". Based upon this improved model an algorithm called Weighted Association Rule Mining (WARM) is developed.

Frequent Itemset Mining algorithms reflect importance of items. weighted frequent itemset mining (WFIM) [2] focused on satisfying the downward closure property. In this model, a weight range and a minimum weight are considered. Different weights are given items within the weight range. For reducing the search space, consider weight and support for each item separately.

Weighted Itemset represents Correlations among multiple highly relevant terms that are neglected by previous approaches. The MWI-SUM [3] makes minimal use of language-dependent analyses. It can also be applicable to the collection of documents belongs to different languages.

There exists the problem of mining frequent itemset from uncertain data under probabilistic model. To avoid this problem, Decremental Pruning (DP) technique [4] is used. Through this, we can achieve significant computational cost savings comparing with other existing approaches.

A FRAMEWORK FOR DETECTING SPAM REVIEWS IN ONLINE SOCIAL MEDIA

¹D.Madhumitha Reddy, ²Dr. R. Jegadeesan ³V.Tejaswi, ⁴T.Sahruday, ⁵Dr.M.Sujatha, ⁶G.Nikitha

^{1,3,5,6}Final year Student Computer science and Engineering, ^{2,5}Associate Professor-CSE

^{1,2,3,4,5}Jyothishmathi Institute of Technology and Science, Karimnagar, India

ABSTRACT:

Today's, a major part of everyone trusts on content in social media like opinions and feedbacks of a topic or a product. The liability that anyone can take off a survey give a brilliant chance to spammers to compose spam surveys about products and services for various interests. Recognizing these spammers and the spam content is a wildly debated issue of research and in spite of the fact that an impressive number of studies have been done as of late toward this end, yet so far the procedures set forth still scarcely distinguish spam reviews, and none of them demonstrate the significance of each extracted feature type. In this investigation, we propose a novel structure, named Net Spam, which uses spam highlights for demonstrating review datasets as heterogeneous information networks to design spam detection method into a classification issue in such networks. Utilizing the significance of spam features help us to acquire better outcomes regarding different metrics on review datasets. The outcomes demonstrate that Net Spam results the existing methods and among four categories of features; including review-behavioral, user-behavioral, review linguistic, user-linguistic, the first type of features performs better than the other categories. The contribution work is when user search query it will display all top-k products as well as recommendation of the product.

KEYWORDS: Social Media, Social Network, Spammer, Spam Review, Fake Review, Heterogeneous Information Networks.

I. INTRODUCTION

Online Social Media gateways assume an influential part in data proliferation which is considered as an imperative hotspot for makers in their publicizing efforts and additionally for clients in choosing items and administrations. In the previous year's [1], individuals depend a ton on the composed audits in their basic leadership procedures, and positive/negative reviews empowering/debilitating them in their choice of items and administrations. Moreover, composed surveys additionally help specialist co-ops to improve the nature of their items and administrations. These reviews in this way have turned into an imperative factor in accomplishment of a business while positive audits can bring benefits for an organization, negative audits can possibly affect validity and cause financial misfortunes[2]. The way that anybody with any personality can leave remarks as spam, gives an enticing chance to spammers to compose counterfeit reviews intended to delude clients' conclusion. These deceptive audits are then duplicated by the sharing capacity of online networking and spread over the web. The reviews written to change clients' impression of how great an item or an administration are considered as spam and are regularly composed in return for cash. The general idea of the proposed structure is to demonstrate a given review dataset as a Heterogeneous Information Network (HIN) [3] and to outline issue of spam recognition into a HIN classification issue. Specifically, here display review dataset as a HIN in which audits are associated through various node types, (for example, highlights and clients). A weighting calculation is then utilized to ascertain each element's significance (or weight).

ENERGY EFFICIENT DATA SHARING METHOD USING LIGHTWEIGHT ALGORITHM FOR MOBILE CLOUD ENVIRONMENT

¹Gurram Sai Kumar, ²Dr. R. Jegadeesan, ³Alla Pravalika, ⁴Gurram Varsha, ⁵Narla RamyaSai,

^{1,3,4,5}Final year Student Computer science and Engineering, ²Associate Professor-CSE

^{1,2,3,4,5}Jyothishmathi Institute of Technology and Science, Karimnagar, India.

Abstract : As the popularity of cloud computing increases on mobile devices, this can store or retrieve personal data from anywhere at any time. At the same time, the problem of data security also increases day by day and substantial studies have also been conducted to improve cloud security, but most of them are not applicable to the mobile cloud, since mobile devices they have a very limited capacity and capacity resources. In this we provide a solution through a light data exchange scheme (LDSS) for mobile cloud computing. Adopts CP-ABE, which changes the structure of access control and even access control technology used in normal cloud environments. This scheme moves a large part of the transformation of the CP-ABE intensive computing access control tree from mobile devices to external proxy servers. Attribute description fields are used to implement deferred revocation in order to reduce the cost of user revocation, which is a thorny problem in systems based on CP-ABE programs. When users share data in mobile cloud environments, this LDSS can effectively reduce the overhead on the mobile device side.

Index Terms – Lightweight algorithm, cloud computing, computational overhead, Lazy-revocation, encryption.

1. INTRODUCTION

With the improvement of distributed computing and the ubiquity of enthusiastic cell phones, people are slowly becoming familiar with another moment of information exchange where information is kept in the cloud and cell phones are used to store / recover the information. from the cloud. Commonly, cell phones only have restricted storage space and computing capacity. Actually, the cloud has a huge amount of assets. In such a situation, to achieve an attractive execution, it is basic to use the assets provided by the specialized organization in the cloud (cloud service provider) to store and share the information. Currently, different portable cloud applications have been used in general. In these applications, individuals (information owners) can transfer their photographs, recordings, reports and different documents to the cloud and offer this information to other individuals (information clients) who wish to share. Cloud service providers also provide information about the utility of the board to the owners of the information. Because individual information documents are sensitive, the owners of the information can choose whether they want to open their information records or they must be informed to the clients of explicit information. Obviously, the security of individual sensitive information information is a major concern for some information owners.

The above problem can be solved using LDSS in a mobile computing environment.

The main tasks in LDSS are the following:

1. To increase the efficiency of access control over the ABE cipher text, we structured an algorithm called LDSS-CP-ABE.
2. Normally, the encryption and decryption process is performed on the devices themselves, which leads to a large computational overload, but in our design the calculation is done on the proxy server itself and also maintains the privacy of the data, in order to access to the structure. it was also added. The decryption key is also loaded into proxy servers in a secure manner.
3. To reduce the revocation problem caused by revocation overload, we introduce a new encryption and an attribute description field.

Finally, a data exchange framework is implemented in LDSS. The experimental results show that this scheme (LDSS) greatly reduces the computation overhead on the client side, which represents a minimal additional cost on the server side. Access control schemes based on ABE on encrypted text.

2. PRELIMINARY AND ASSUMPTIONS

In this segment, we first quickly present the start procedures firmly identified with LDSS and then present the framework model and some safety assumptions in LDSS.

2.1 Preliminary Techniques

2.1.1 Bilinear Pairing:

Define a function l in the following way: $l: g_0 * g_0 = g_1$

In this function, both g_0 and g_1 are multiplicative cyclic groups of the prime order p .

Suppose that g is a generator of g_0 , F_f is a finite field. So l is a bilinear pair if l has the following properties:

- (1) Bilinear: $\forall x, y \in g_0, \forall c, d \in F_f, l(x^c, y^d) = l(x, y)^{cd}$
- (2) No degeneration: $l((G, G))$ is a member g_1 of G is a member of g_0 .
- (3) Computability: $\forall x, y \in g_0, e(u, v)$ can be calculated.

In our implementation, we usually take xx as a group consisting of points on an elliptic curve over a finite field. Other descriptions of how these parameters are defined and generated can be found in [11].

ENERGY EFFICIENT AND SECURED PRE EXISTING ROUTING IN MOBILE ADHOC NETWORK

¹ Madala Venkaiak Naidu, ²Dr. R. Jegadeesan ³Palakurthi Shashank, ⁴Aileni Vinisha, ⁵Thudi Ravali Reddy,
⁶Balakishan Porika

^{1,2,3,4} SB.Tech Students, ^{2,6}Associate Professor-Dept of CSE

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology & Science, Karimnagar, India.

ABSTRACT:

A versatile specially appointed system (MANET) is a framework less system where the one cell phone interface with other gadget remotely. Every gadget in MANET changes its development and connections toward any path regularly. Directing in MANET is the way toward sending the data from source to goal hub. Amid directing procedure, vitality utilization and burden adjusting are the requesting issue to improve the system lifetime. Also, security has principle influence amid the information transmission from source hub to goal. Verified steering is procedure of saving the data from unapproved clients amid information transmission in MANET. In existing works, there are numerous strategies for vitality effective and verified directing in MANET. However, the vitality utilization and security level was not improved. Our primary goal of the paper is to think about the current issues for vitality productive and verified steering in MANET.

Keywords: Mobile ad hoc network (MANET), data transmission, secured routing, infrastructure-less network, energy consumption.

I. INTRODUCTION

Remote MANET is another system less correspondence development which is includes those conditions where organization of establishment costs high. Beside this authenticity it has awful checks in regards to verify correspondence. MANET is described by its features such as self-orchestrating, scattered application and multi center directing. Due to its dynamic nature keeping up the verified correspondence is dull when united organization does not exist. In such condition key organization plans is a troublesome endeavor to achieve an ensured correspondence [1].

The standard preliminary of "MANETs is to course with low expenses in spite of when the conditions were dynamic". An Overhead given here is depicted the degree that directing convention control messages which eat up both channel transmission limit and the battery essentialness of focus focuses for correspondence/dealing with. Existing controlling customs in remarkably assigned structures use the single course that is worked for source and target focus point facilitates. Because of focus point flexibility, focus point disappointments and the dynamic attributes of the radio channel, which is related in a course, may maybe finish up being rapidly far off, influencing the course to invalid. The overhead of discovering elective courses mounts close-by extra bundle development delay.

MANETs are rich, self-arranging, and structure less get-togethers of cell phones. They are normally made for a particular reason. Every gadget inside a MANET is known as a middle and should fill the job of a customer and a switch.

Correspondence over the system is master by sending packs to a target focus point; when a speedy reason target interface is closed off broadly engaging focuses are utilized as switches. MANET correspondence is usually remote. Remote correspondence can be superfluously gotten by whichever focus in the degree of transmitter. This may lead the MANETs open to a degree of strikes, for example, the Sybil trap and the course control assaults that can trade off the dependability of the system. A MANET "includes flexible stages (e.g., a change with different hosts and remote explicit gadgets) - in this essentially inferred as 'focus focuses'- which are allowed to go about abstractly". These inside focuses are masterminded in or on the planes, ships, trucks, vehicles, even on solitary gadgets, and possibly there is different hosts per switch. A Mobile uniquely designated Network is an autonomous arrangement of all-around focus focuses [2].

These structures may work in partition or section and interface with a settled system. In the previous arranged method, it is much of the time obvious to fill in as a "stub" deals with related with a settled web work. These Stub systems propose advancement beginning at or perhaps vault for inner focus focuses yet don't empower exogenous activity to "travel" totally through the stub

REVIEW-FREE DISTRIBUTED STORAGE BY MEANS OF DENIABLE ATTRIBUTE BASED ENCRYPTION

¹K.V.Anjani, ²Dr. R. Jegadeesan, ³V.Sai Sri Mahitha, ⁴P.V.Sri Harshini, ⁵B.Shiva, ⁶N.Anudeep, ⁷Dr.D.Srinivas

^{3,4,5,6}UG Students, ^{2,6}Associate Professor-Dept. of Computer Science and Engineering,
^{1,2,3,4,5,6}Jyothishmathi Institute of Technology & Science, Karimnagar, India

Abstract: Transformations square measure obligatory to mount the unstoppable stream of amendment. The majority of associations are endeavoring to lessen their registering cost through the methods for virtualization. This interest of decreasing the processing cost has prompted the advancement of Cloud Computing. The most appealing administration/service of cloud computing is Data outsourcing, because of this the information proprietors, who are commonly called as data owners can have any size of information on the cloud server and clients can get to the information from cloud server when required. As servers and information proprietors are clear personalities, the example of information accumulating raises different security challenges. It is hard to decide if the cloud storage providers meet the client's desires for information security. Numerous plans were proposed for keeping up honesty of cloud information yet practically speaking those plans neglect to ensure the information respectability. This structure is exhibited for a cloud storage encryption conspires which empowers cloud storage providers for making the convincing forged/fake client secrets so as to secure client protection. Since coercers can't reveal whenever acquired private details are valid or not.

Index Terms – Deniable Encryption, Cloud Storage, Security, Coercers, Data outsourcing.

I. INTRODUCTION:

Cloud computing design has watched a broad move towards its reception and it has turned into another propensity in the data innovation space as it guarantees striking cost decreases and new business potential outcomes to its clients and suppliers. The cloud storage providers are in charge of keeping the data unfilled and open, and the physical condition protected and running. To store the application information from the clients, there are different organizations which purchase or rent the capacity limit from the cloud storage providers. The buyers can stock their related information on the cloud and can even access the information from any point whenever just by associating with the web. This occurs in a cloud storage condition.

The information which has been put away on the cloud is typically encrypted and verified from the access by different clients. The fundamental reason for this encryption and security is because of the client's protection. By considering into record concerning the collaborative property of the cloud information, Attribute-Based Encryption (ABE) is a standout amongst the most acceptable encryption plans for the cloud storage. It is likewise one sort of public key encryption. In this, the cipher-text and the secret key of the client will rely upon attributes. In that way, just when the arrangement of qualities of the client key will be proportionate to the attribute of the cipher text, at that point just the decryption of cipher text would be possible. In this, the cloud storage providers use certain techniques to make convincing fake user secrets. By permitting certain fake user secrets, the outside coercers can just secure fake information from the client's stored cipher text. On the off chance that the coercers trust the secrets they got were genuine, at that point they will be satisfied. The cloud storage providers need not to give any sort of the secrets. Subsequently, the protection for the client's information is saved.

This thought principally originates from an extraordinary sort of encryption plot called deniable encryption. Senders and recipients make strong fake evidence of fake information in the cipher-text with the end goal that the outside coercers will be satisfied. Deniable encryption includes such sort of procedure. This thought is utilized so those, the cloud storage providers can give review free/inspection free storage administrations (services). This plan depends on Waters cipher-text policy-attribute based encryption (CP-ABE) conspires. The Waters plot/scheme is being expanded from prime order bilinear groups to Composite order bilinear groups. It empowers the clients to most likely give the fake secrets that appear to be legitimate to the outside coercers by the subgroup choice issue.

II. LITERATURE SURVEY:

Sahai and Waters presented Attribute-based encryption (ABE) [1], takes into consideration pounded get to control on encrypted information. In its key-policy enhance (the double cipher-text approach situation continues the different way), to encode/encrypt messages under a lot of attributes and private keys are connected with access structures that indicate which cipher-texts the key holder will be permitted to decode/decrypt. In most ABE frameworks (systems), the cipher-text size has added substance development with the quantity of cipher-text attributes and the main realized which is the only known exception supports restricted types of fascas arrangements. The work about the attribute based encryption (ABE) plans taking into account genuinely open access structures and with constant cipher-text size. In the first outcome, cipher-text policy based ABE scheme with $O(1)$ - size cipher-texts for threshold access policies and where private keys stay as short as in past frameworks (systems). In the second outcome, they demonstrated that a specific class of identity based broadcast encryption schemes typically gives monotonic key-policy attribute-based encryption (KP-ABE) frameworks (systems) in the particular set model. The last undertaking is a KP-ABE acknowledgment supporting non-monotonic access structures (i.e., that may contain invalidated attributes) with short cipher-texts. As a moderate advance towards this outcome, they depicted a proficient identity-based cancellation system that, they joined with a specific portrayal of their general monotonic development, offers ascend to the most expressive KP-ABE acknowledgment with constant-size cipher texts. The drawback of the second and third developments (constructions) is that private key shave quadratic size in the quantity of attributes. Then again, they lessen the number of pairing evaluations to a consistent, which gives off an impression of being a unique feature among communicative KP-ABE plans.

IOT BASED SMART AIR POLLUTION SURVEILLANCE SYSTEM

¹N.Venkateswaran, ²R.Jegadcesan, ³K.Saideepthi, ³B. Sankeerthana, ⁴D. Soumya

^{1,2}Associate Professor, ^{2,3,4}UG Student

Computer Science and Engineering
Jyothishmathi Institute of Technology And Science, Karimnagar, India.

Abstract : The devastating issue of today, in this highly competitive world is air pollution. It is one of the leading factors to cause environmental and human health risks in India. Due to this, the quality of air in urban areas is drastically decreasing day by day. It also leads to many premature deaths, respiratory and cardiovascular problems, and a variety of cancers. There are various sources of air pollution from among which air pollution due to automobiles plays a crucial role. Because of this, pollution levels go beyond the safe limits causing a severe threat to the ecosystem. In order to control pollution, many real-time air quality monitoring systems have been proposed and implemented. Here this paper is all about describing the various methods, techniques and technologies that are so far have been proposed and implemented to make the living environment free from pollution. At last but not least, we conclude by specifying the goals that enhanced in the future.

Keywords – Air pollution, sensors, pollution prevention, wireless network.

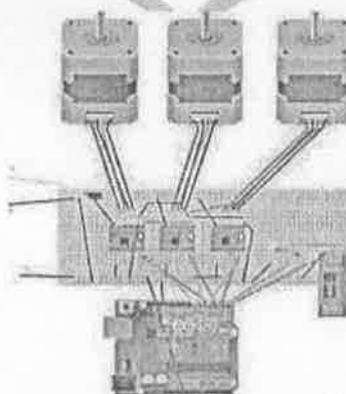
I. INTRODUCTION

The most vulnerable global challenges faced today is air pollution. Air pollution presents a serious threat to urban areas, especially where human occupancy is more; it causes a severe impact on human work performance. Not only this air pollution is responsible for premature deaths, global warming, respiratory problems, cardiovascular problems and variety of cancers. There are many resources of air pollution, from among which traffic induced air pollution plays a significant role. To mitigate this air pollution and have 24*7 control on pollution level, we need to have real-time air quality monitoring systems, so that we can have a pollution free environment. Many research works are going on this particular aspect, one of the research works has proposed a real-time air quality monitoring system that has been made successful in making the environment free from pollution for about 75%. This particular system will implement using one of the sophisticated IOT technology.

II. IOT BASED MONITORING SYSTEM:

In the era of IOT, air pollution monitoring has overcome many of the limitations faced by the conventional monitoring system. It is the most trending networks in which devices like sensors, hardware, software and actuators (controllers) that stay connected and communicate with one other without human intervention. One of the unique features of IOT is that it just goes beyond the devices that are having no more internet connection that means without an internet connection, it allows all the accessories to stay connected and to communicate that is made possible through machine learning. The purpose of this system is not just monitoring the pollution level but also to control vehicular flow and help the users to create a safe and secure journey.

By introducing IOT into the field of environmental protection following benefits to be achieved:



- IOT helps to form a sensor network in a large area without any overhead.
- By implement IOT, hardware cost will reduce.
- Since many sensors are involved, so that, it ensures accuracy.
- As the big-data analysis is required, decision making for emergency response after a pollution accident happens will also be guaranteed.
- Besides this, some of the issues will resolve:

ASPECT BASED OPINION MINING USING CAMEL MODEL

¹V.Nareen Kanth, ²Dr. R. Jegadeesan, ³Amaal Fathima, ⁴R.Manasa, ⁵Sara Osmani

^{1,2}Associate Professor, ^{2,3,4}Under Graduate B.Tech Final Year-Department of Computer Science and Engineering

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract – The mining of opinion based on aspects creates in-depth views on a subject such as a product or an event. With the rapid growth of texts on the Internet, views on the mining side have become a promising way to analyze public opinion on the Internet. In particular, the flourishing of various types of on-line media provides diverse and integrated information, providing unprecedented opportunities for mining through the media. Along this line, we suggest CAMEL, an innovative model for cross-browser exploration side by side across asymmetric groups. CAMEL acquires information integration by modeling common and specific aspects across groups, while preserving all opposing views of the conflicting study. It is also proposed to use an automatic labeling system called AME to help distinguish words and words without identifying human identifiers, which is enhanced by adding similarities that are based on the inclusion of the word as a new feature. Furthermore, the CAMEL-DP, a non-parametric replacement of CAMEL, is also proposed based on the associated Dirichlet operations. The extensive experience of the real-world multivariate review data demonstrates the superiority of our competitive baselines. This is especially true when information shared between different groups becomes seriously fragmented. Finally, a case study of the Shanghai Stampede 2014 event shows the practical value of CAMEL for real-world applications.

I INTRODUCTION:

The substantial growth of user content expressed on the Web, and the extraction, understanding, and summarily of public views expressed on on-line media platforms, has become an important topic of research and has gained much attention in recent years. The mining of opinion based on aspects, originally proposed to create detailed views towards a particular product perspective, has become a promising challenge to the public opinion at the mining level of on-line social media, where the concept of an aspect has extended to a fundamental, Perspective towards a public event. For example, for a specific major event: 2015, two sessions (from the National People's Congress and the Chinese People's Political Consultative Conference) in China, we would like to know detailed general views on a wide range of focused topics that have sparked heated debates, for example, the downward pressure on GDP, opportunities in Jing-Jin-Ji integration, Hukou reform, anti-corruption, environmental protection, etc. The technique of side-by-side mining is an obvious candidate to fulfill this task.

To meet the above challenge, we are using CAMEL (Max-L-Max), an innovative model of spatially-based spatial mining model across asymmetric groups. On our best knowledge, our work is among the early studies in this direction. CAMEL is essentially a type of LDA model across a group, which compiles views at the side level and gains information by learning common and specific aspects across different groups. By maintaining all the views corresponding to the common and specific aspects, CAMEL is also able to conduct an analytical analysis of variance.

Moreover, to boost CAMEL, we are using AME, an automatic labeling scheme for maximum entropy model, to discriminate aspect and opinion words without heavy human labeling. It is further enhanced to the so-called EAME scheme by employing the word embedding-based similarity. Finally, we propose CAMEL-DP, a non parametric alternative to CAMEL. CAMEL-DP is based on coupled Dirichlet processes and is capable of automatically estimating the number of common and specific aspects, which might be a headache in practice for parametric models like CAMEL.

II RELATED WORK

2.1 Aspect-based Opinion Mining

Usually, two sub-tasks are involved in this problem, ie, identifying the title or feature and drawing the opinion. Most early identification works are feature-based approaches for example, the application of repeated mining of materials to determine

DATA CLUSTERING FRAMEWORK BASED ON DENSITY

¹Vengala Rakshitha, ²Dr. R. Jegadeesan, ³P.Balakishan ⁴K.Jayasri, ⁵B.Anjali, ⁶P.Saipriyanka

^{1,3,4,5} UG Student, ^{2,3} Associate professor.-Department of Computer Science and Engineering

^{1,2,3,4,5,6} Jyothishmathi Institute of Technology and Science, Karimnagar, India.

Abstract –Grouping of information with high measurement and variable densities represents a surprising test to the customary thickness based bunching strategies. As of late, entropy, a numerical proportion of the vulnerability of data, can be utilized to quantify the outskirts level of tests in information space and furthermore select huge highlights in list of capabilities. It was utilized in our new system dependent on the sparsity-density entropy (SDE) to bunch the information with high measurement and variable densities. To begin with, SDE directs great testing for multidimensional information and chooses the agent highlights utilizing sparsity score entropy (SSE). Second, the grouping results and commotions are acquired embracing another thickness variable bunching technique called density entropy (DE). The adequacy and effectiveness of the proposed SDE structure are approved on engineered and genuine informational indexes in correlation with a few grouping calculations. The outcomes demonstrated that the proposed SDE structure simultaneously identified the clamors and handled the information with high measurement and different densities.

Index Terms: *Density Entropy, Sparsity-Density Entropy, Sparsity Score Entropy.*

I. INTRODUCTION

DATA agglomeration is one in every of the foremost wide ways in data processing, that has broad applications in pattern recognition, image process, and information compression, among others [1]. Agglomeration algorithms are divided into five categories: partitioned, ranked, grid-based, density based, and model-based. Partitioned agglomeration ways, e.g., K-means[1], K-medoids[11], and Fuzzy C-Means(FCM) , assign the incoming information points into K disjoint subsets, such points at intervals a cluster are a lot of similar than those in numerous clusters. Ranked agglomeration ways embrace each agglomerated and factious methods: agglomerative methods begin with single-point clusters that are in turn incorporate till a particular criterion is reached; divisive methods split an initial cluster of all data points into top-down density grams supported certain criteria, as in Rock [9], Cure [8], and Chameleon [12].

In this paper, not all the input parameters are pre-given however mechanically determined consistent with the characteristics of knowledge. The formula conjointly works on knowledge sets of uniform densities. The most contributions are highlighted as follows:

- 1) We have a tendency to propose a unique framework, known as the Sparsity Density Entropy (SDE) framework, which might effectively method each low and high-dimensional knowledge.
- 2) The planned density-based SDE bunch outperforms alternative ways for clusters with variable densities through every cluster.
- 3) The strategy will effectively exclude the world noises supported absolutely the boundary purpose, that is trivial within the density distribution of knowledge points, and additional take away the native noises consistent with the native boundary purpose.

II. RELATED WORK

This section reviews sampling techniques and feature selection methods

1) Statistical Optimal Sample Size

Testing in information handling might be a precondition technique to pre-select examples of prime quality from the underlying data. However, there is an exchange off among precision and productivity of calculations once the exactness improvement winds up immersed at gigantic example sizes. In [7], scientists assessed their live on four gigantic datasets. They found that the resulting tree sizes with SOSS zone unit significantly littler than those with the total size.

2) Feature Selection

As one vital preprocessing step in information agglomeration, feature choice could be a method of selecting a representative and effective set from original options within the high dimensional information house in step with the specified analysis criterion, specified the preserved feature set is most helpful in capturing the intrinsic properties[5]. Feature choice ways are often divided into 3 groups: filter approaches, wrapper approaches, and embedded approaches.

III. RESEARCH METHODOLOGY

Clustering problems on data sets with high dimensions and varying densities make it a landmark and challenge the methods of traditional group analysis. The goal of reducing the dimension is to reduce storage by data compression, to remove the effect of noise features [4], and to extract media features. SDE proposed framework improves the objective function of compactness at home block and distance between clusters. We choose grouping refers to the clusters using

INFORMATION PRIVACY AND MALICIOUS ACTIVITY AVOIDANCE FOR MEDICAL DATA DISTRIBUTION IN CLOUD ENVIRONMENT

¹M.Ravindar, ²Dr. R. Jegadeesan ³M.Anusha, ⁴B.Navya, ⁵Ravali Kotichintala.

^{1,2}Associate Professor, ^{3,4,5}B.Tech Final Year Student-Department of Computer Science and Engineering

^{1,2,3,4,5}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract: With the proliferation and ever-increasing capabilities of wearable devices, there is a significant role to provide medical data distribution in a secure way. For the sake of data security, the collected big data can be encrypted and then stored on a cloud-let such as authorized user, data owner and the doctors can access. In this work, we propose a collaborative model consists of intrusion detection and prevention system functions based on distribute IDS and IPS using NTRU algorithm. Whereas intrusion detection system monitoring system monitor a network for active or imminent security policy violation, intrusion prevention goes a step further to stop any kind of violation from occurring. Initially, we utilize Number Theory Research Unit in the data collection and encrypt the data which is collected by wearable devices. Then, we divide user's medical data stored in a remote cloud. Finally, security analysis shows that the data sharing through cloud-let scheme is secure and improve data processing ability in cloud-let.

Index Terms - Privacy, datadistribution, medical data.

1 INTRODUCTION

We surveyed the problem of information privacy and distributing large medical data in cloud lets and the remote cloud. We undertake a structure which does not permit users to convey data to the remote cloud in analysis of secure collection of data, as well as low communication cost. Moreover, it permits users to transmit data to cloud-let, which activates the data distribution problem in the cloud let. Initially, we use NTRU system to make sure transmission of user's data to the cloud-let in secure manner. Secondly, the user data will be further transmitted to remote cloud by cloud lets. A cloud-let is formed by a specific number of mobile devices whose holders may require and/or share some specific data contents, so in this stage we mainly considered about data distribution and privacy protection. We use trust model to estimate users trust level to justify whether to share information or not. Thirdly, for maintaining the privacy of cloud data, we divide the information stored in the remote and encrypt the information in different ways, so as to not just to make sure the data protection but also raise the efficiency of transmission.

In summary, the main contribution of this paper includes:

- A cloud-let based health care system is introduced, where the privacy of authorized user's physiological data and the effectiveness of data transmissions are our primary aim.
- We utilized NTRU for information protection at the time of information transmissions to the cloud let.
- In order to serve data in the cloud-let, we use users similarity and reputation to build up trust model.
- We partition data in remote cloud into various kinds and utilize encryption mechanism to protect the data.
- We propose collaborative IDS and IPS based on cloud-let network to protect the health care system against harmful attacks.

2 RELATED WORK

Our work is closely related to privacy protection based on cloud computing and cloud-based collaborative networks. We will provide a brief review of the business in these aspects.

2.1 Maintain privacy based on the cloud

Despite the development of cloud technology and the emergence of more and more platforms to share the cloud, clouds have not been widely used to share health care data due to privacy concerns. [8] There are many works on the protection of traditional privacy of health care data [5]. In Le et al. [9], a system called SPOC, which symbolizes a neutral and secure opportunistic computing framework with respect to privacy, has been proposed to address the problem of the storage of health care data in the cloud environment and the problem of protection of privacy & security. in this environment Article [1] A composite solution proposal that implements multiple common techniques to protect the privacy of health care data sharing in a cloud environment. In Cao et al. [11], a privacy protection system (MRSE) was introduced (a search for several words in the search agreement for encrypted data in cloud computing), which aims to provide users with multiple keyword methods for data encrypted in the cloud. Although this method can provide a hierarchy of results, where people care, the amount of the account can be stressful.

AUTOMATIC PRIVACY PROTECTION OF USER UPLOADED IMAGES ON SOCIAL SITES

¹B.Bhavani, ²Dr. R. Jegadeesan ³A.Pavithra, ⁴R.Sai Spandana, ⁵K.Srikanth, ⁶B.UmaRani

^{1,2,3,4}SB.Tech Final Year Students, ^{2,6}Associate professor-Department Of Computer Science And Engineering, ^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar , India

Abstract : Online social networks like Face book and My space are popular. These sites have increased the number of people who connect and share their personal information such as photos and activities. This reveals that the privacy concerns of the people are rich and varied. Proper configuration of access control can be difficult and time-consuming .The user's lack of understanding of privacy settings can lead to a lack of willingness to set up privacy manually. We use a two-level framework that uses user history available on the site and sets the privacy policy for user images so that the user can easily use the policy setting and secure their images. In this, we use the Adaptive Privacy Policy (A3P) prediction system, which allows users to use the free privacy settings experience for unrest by automatically creating privacy policies.

Index Terms – Adaptive privacy policy prediction, social networking, online photo sharing, classification

1.INTRODUCTION

More and more people go online today and share their personal images and get connected with people. Sharing of information takes place even in existing groups or social circles [1] .This helps people to get connected easily with each other. This connection helps to identify the new companions and gives an idea about their importance and social surroundings. Anyhow, content sensitive images may release personal information. Let us look at an example, where an image of a person in family event has to be uploaded in social site like Google+ circle or face book, but this image will be naked to everyone, rather than to only family members. This sharing of images in social sites may also lead to unnecessary exposure and privacy contravention [2] . In future, it is possible for other users to gather rich accumulated information can result in unnecessary disclosure of one's private environment and lead to misuse of one's private information.

Many of the content sharing sites concedes the users to drop their privacy specifications .But unexpectedly modern studies have shown that the users are trying very hard to set up the shared data can be wearisome and error-prone [5]. So the people have recognized the requirement of privacy recommendation system which can advice users to set their privacy with ease. Anyhow, current systems for setting privacy automatically appear to be insufficient to solve the unique privacy preferences of images [7], due to the amount of data intrinsically carried within the images and their dependency with the online environment wherein they are disclosed.

2. RELATED WORK

Our work is related to setting up privacy settings in social sites, recommendation systems, and privacy online image analysis.Many modern businesses have studied how to automate the task privacy settings .Bonneau et al [4] the concept of privacy groups was proposed which recommends that users have a set of privacy settings that the "experts" or other trusted friends have already set, so ordinary users can choose either direct setup or just need to make a slight adjustment. Similarly, Danizis [8] proposed an automatic learning approach extract privacy settings from the social context at home that the data is being produced.

In parallel with Deniz's work, Adu-Oppong et al. Develop privacy settings based on the concept of "social circles" consisting of groups of friends who are split by splitting friends' lists of users. Ravichandran et al. Studied how to predict user privacy preferences for location-based data based on location and time of day. Fang et al. Privacy Wizard suggested to help users to grant privileges to their friends. The wizard asks users to customize privacy first to your specific friends, then use this as an entry to create a workbook that classifies friends based on their profiles and automatically assigns privacy labels to friends not served. Recently, Klemperer et al .studied whether keywords and captions with users their image tags can be used to help users more intelligently create and maintain access control policies. Results corresponds to our approaches: tags created for the organization can be redirected for help in establishing reasonable access control rules. The above approaches focus on policy-making settings are for attributes only, so they are considered primarily social context like a buddy list. While interesting, they may not enough to meet the challenges posed by the image files that may vary significantly not only privacy because of the social context but also because of the actual image includes. As far as the images, the authors [7] presented in an expressive language for images uploaded to social sites. This work is complementary to us because we do not deal with it expression policy, but relying on the policy of common inodels.

Specification for our predictive algorithm . In addition, there is a wide range of work on analyzing the content of images, for classification and interpretation [6] And the arrangement of images also in the context of photo sharing sites such as Flickr . Among these works, Zier's work [9] may be the closest to our work. Zerr explores the perception of privacy images using a combination of features, both content and metadata. This is a binary classification (private versus generic), so the task of classification is very different from our classification.

PERFORMANCE ANALYSIS OF MACHINE LEARNING ALGORITHMS FOR IDS

¹K.Priyanka, ²Dr. R. Jegadeesan ³V.Neelima, ⁴S.Divya, ⁵K.Sairamachari, ⁶M.Ganesh

^{2,3}Assoc.prof, ^{1,4,5,6}B.Tech Final Year Students-Computer Science and Engineering

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, karimnagar, India

Abstract : Any abnormal activity will be assumed to be anomalies intrusion. Intrusion could be a major issue that is to be addressed and should be detected. Intrusion detection could be a central part of security tools, such as reconciling security appliances, intrusion detection systems, intrusion interference systems, and firewalls. Different techniques have been used for intrusion detection however their attainment is a problem. The performance of intrusion detection system primarily depends on accuracy that must produce less warning and high detection rate. To resolve the problems related to performance the techniques like support vector machine(SVM), Multi layer perceptron and different techniques are utilized in recent work. These techniques impose bound limitations and conjointly not applicable for big knowledge sets, like system and network knowledge. This downside is addressed during this paper by introducing well-known economical machine learning algorithms like SVM, random forest, and extreme learning machine(ELM). These techniques are well-known due to their ability in classification

IndexTerms -Detection rate, extreme learning machine, SVM, Warning.

I. INTRODUCTION

Intrusion may be a severe issue in security and a chief drawback of security breach, as a result of one instance of intrusion will steal or delete information from laptop and network systems in a few seconds. Intrusion can even harm system hardware. Furthermore, intrusion will cause large losses financially and compromise the IT vital infrastructure, thereby leading to data inferiority in cyber war. Therefore, intrusion detection is very important. Different intrusion detection techniques are obtainable, but their accuracy remains associate issue; accuracy depends on detection and warning rate, the matter on accuracy desires to be self-addressed to cut back the false alarms rate and to increase the detection rate. This notion was the impetus for this analysis work. Thus, support vector machine (SVM), random forest (RF), and extreme learning machine (ELM) applied during this work; these ways are proved effective in their capability to deal with the classification. Intrusion detection mechanisms are valid on a standard dataset, KDD. This work used the NSL-knowledge discovery and data processing (KDD) dataset, that is associate degree improved type of the KDD and is taken into account a benchmark within the analysis of intrusion detection strategies. The remainder of the paper is organized as careful below. The connected work is given in Section II. The projected model of intrusion detection to that totally different machine learning techniques are applied is delineate in Section III. The implementation and results ar mentioned in Section IV. The paper is finished in Section V, that provides a summary and directions for future work.

II. RELATED WORK

Verifying pc and system data is imperative for associations and individuals because of traded off data will cause sizeable damage. To maintain a strategic distance from such conditions, interruption recognition frameworks zone unit essential. As of late, unique AI approaches are anticipated to improve the execution of interruption location frameworks. Wanget al arranged partner degree interruption location system dependent on SVM and substantial their strategy on the NSL-KDD dataset. They guaranteed that their procedure, that has 99.92% adequacy rate, was better than various methodologies; in any case, they neglected to make reference to utilized dataset measurements, scope of preparing, and testing tests. Yet in addition, the SVM execution diminishes once huge data zone unit concerned, partner degree and it is anything but a perfect option for dissecting huge system traffic for interruption identification.

ONLINE SOCIAL VOTING BASED ON COLLABORATIVE FILTERING

¹Kondam DivyaVani, ²Dr. Chalasani Srinivas, ³Dr. R. Jegadeesan ⁴Mangalarapu Rakesh, ⁵Naini Shravani Reddy

^{1,4,5} UG Student, ^{2,3} Associate Professor-Department of Computer Science and Engineering

^{1,2,3,4,5} Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract – The social voting offers the chance to advance our creative idea, and to gather voting by means of online life channels. In online informal communities, social voting is a slanting viewpoint. This perspective raises distinctive difficulties and conceivable outcomes for suggestion, pursues a lot of various calculations like, matrix factorization (MF) and nearest neighbor (NN) based recommender systems (RSs) that break down client interpersonal organization and gathering connection data for social voting proposal. This application demonstrate that interpersonal organization and gathering association data can likewise improve the proficiency of notoriety based voting recommendation, and informal community data impacts bunch connection data in NN-based methodologies through analyses with genuine social voting records. We further present a crossover recommender system (RS), conglomerating distinctive single ways to deal with addition the top n hit rate.

Index Terms - Matrix Factorization, Social voting, and Recommender systems.

I. INTRODUCTION

Online social networks (OSN), like Facebook and Twitter, facilitate simple data sharing among friends. A user not solely will share her updates, in sorts of text, picture, and video, together with her direct friends, however can also quickly publicize those updates to a way larger audience of indirect friends, leverage on the wealthy property and global reach of widespread OSNs. Several OSNs currently supply the social ballot perform, through that a user will share with friends her opinions, e.g., *like* or *dislike*, on numerous subjects, ranging from user statuses, profile photos, to games compete, products purchased, websites visited, and so on. Taking *like-dislike* style of voting one-step more, some OSNs, empower users to initiate their own voting campaigns, on any topic of their interests, with user customized voting choices. The chums of a voting leader can participate within the campaign or retweet the campaign to their friends.

The increasing quality of social voting forthwith brings forth the “information overload” problem: a user can be overwhelmed by varied voting that were initiated, participated, or retweeted by her direct and indirect friends. It is vital and difficult to gift the “right voting” to the “right users” therefore on improve user expertise and maximize user engagement in social voting. Because of social propagation and social influence, a user voting behavior is powerfully correlative along with her social friends. Social voting poses distinctive challenges and opportunities for RSs utilizing social trust info. Moreover, voting participation are unit binary while there are no negative samples. It is, therefore, intriguing to develop RSs for social voting.

Toward addressing these challenges, we tend to develop a group of novel RS models, as well as matrix-factorization (MF)-based models and nearest-neighbor (NN)-based models, to find out user-voting interests by at the same time mining information on user-voting participation, user-user relationship, and user group affiliation. We tend to consistently measure and compare the performance of the projected models exploitation real social voting traces collected from real time records. The contribution of this paper is threefold.

- On-line social voting has not been abundant investigated to our data. We tend to develop MF-based and NN-based RS models. We tend to show through experiments with real social voting traces that each social network information and group affiliation information are well mined to considerably improve the accuracy of popularity-based voting recommendation.
- Our experiments on NN-based models recommend that social network information dominate group affiliation information. In addition, social and group information is a lot of valuable to cold users than to serious users.
- We tend to show that straightforward metapath-based NN models surmount computation-intensive radio frequency models in hot-voting recommendation, whereas users’ interests for nonhot voting is higher well mined by MF models.

II. RELATED WORK

Asim Ansari, and Rajeev Kohli [1] analyze the benefits of the community oriented sifting strategies, propose that inclination models utilized in promoting offer great options that permits measurable incorporation of five kinds of data valuable for making suggestions: an individual's communicated inclinations, inclinations of different purchasers, master assessments, thing qualities and individual attributes.

A dominating way to deal with community oriented separating is neighborhood based (“k – closest neighbors”) [2], where a client – thing inclination rating is interjected from evaluations of comparative things as well as clients. Recommender frameworks examine examples of client enthusiasm for things or items to give customized suggestions to things that will suit a client's taste. The CF issue can be given a role as missing worth estimation: given a client – thing lattice of scores with many missing-qualities, and the objective is to evaluate the missing-qualities dependent on the given ones. The realized-client-thing scores measure the measure of enthusiasm between individual clients and things.

INVESTIGATION OF ENERGY CONSUMPTION IN WIRELESS SENSOR NETWORKS USING LINK-DELAY AWARE ROUTING

¹ A.Kalyani, ²Dr. R. Jegadeesan ³CH.Mani Teja, ⁴Rakshanda Rasheeda Aziz, ⁵K.Nikhil Chand, ⁶R.Ventaeshwarlu

^{1,3,4,5}UG Student-Department of Computer Science and Engineering

^{2,6}Associate Professor- Department of Computer Science and Engineering

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract: In a harsh environment, wireless sensor points are spread where conditions vary greatly from abrupt changes in connection quality and node status. Due to the difference in connection quality and node status, the end-to-end delay for each sensitive node varies. The sensor contract, on the other hand, has limited capacity, and it is a major concern to extend the lifetime of the network. To address these issues, this paper offers a simple, measurement guide, predicted remaining deliveries (PRD), combination of parameters including residual energy, link quality, end-to-end delay, and distance together to improve network performance. In addition to the end-to-end delay, PRD sets the weights for individual connectors to reflect the node state over the long run of the network. The simulation results show that PRD performance is better than the widely used ETX and two other power and end-to-end delays that have been recently designed to ensure packet delivery.

Index Terms- Energy consumption, Link-delay aware, routing metric.

1. INTRODUCTION

The Wireless Sensor Network (WSN) consists of independent spatially distributed sensors for monitoring physical or environmental conditions, such as temperature, sound, pressure, etc., and passing their data collaboratively across the network to a central location. Modern networks are bidirectional, so you can also control the activity of the sensor. Military applications such as battlefield observation have driven the development of wireless sensor networks; these networks are now used in many industrial and consumer applications, such as industrial process monitoring and control, machine health monitoring, and so on.

WSN is designed from "nodes" - from a few to several hundred or even thousands, where each node is (or sometimes) connected to one of the sensors. Typically, each sensor network node has several parts: a radio transmitter and receiver with an internal antenna or an external antenna connection, a precise monitor, an electronic circuit to interact with the sensors and a source of energy, usually the battery or a form included in the power assembly. The shoebox size sensor node may vary depending on the size of the dust bead, although no real "movements" have been created with real microscopic dimensions. Depending on the complexity of the individual sensor nodes, the costs of sensor nodes are similar, ranging from a few hundred to hundred dollars. Restrictions on volume and cost cause the sensor to hold corresponding resource restrictions such as power, memory, computing speed, and bandwidth of communication. WSN topology can be different to advanced multiple wireless network hops from a simple star network. Routing or flooding may be the propagation technique between network leaps.

2. RELATED WORK

Extending their lifetime is important because of a battery constraint in wireless sensor networks (WSNs). In doing so, energy-efficient routing techniques for WSNs play a major role. Finally, some open problems are indicated in the design of energy-efficient routing protocols for WSNs[1]. Wireless sensor networks' dynamic nature and topology introduces very special requirements in the routing protocols to be met. Energy-efficient routing protocols are divided into four main systems: network structure, communication model, topology-based routing and reliable routing[2]. The expected transmission count metric (ETX), which finds high-throughput paths on wireless multi-hop networks. ETX minimizes the expected total number of packet transmissions needed to deliver a packet to the ultimate destination successfully[3]. Localization of wireless sensor networks is an important area that attracted considerable interest in research. It provides an overview of the measurement techniques based on these measurements in the location of the sensor network and the one-hop location algorithms [4]. A routing protocol design must be based on its target network characteristics. Our work provides important guidelines for the design of routing metrics and identifies the specific properties that a routing metric needs to combine with certain routing protocol types[5]. The link-aware clustering mechanism (LCM) considers primarily node status and link condition, and uses a novel clustering metric called the predicted transmission count (PTX) to evaluate cluster head and gateway qualification[6]. In a sensor network, topology control loads on sensor nodes and increases the scalability of the network and the lifetime. HEED (Hybrid Energy Efficient Distributed Clustering),

ENHANCED SECURITY SERVICES TO SHARE OF PERSONAL HEALTH DATA IN THE CLOUD

¹N.Venkateswaran, ²Dr. R. Jegadeesan ³G.Kalyani, ⁴G.Ravali, ⁵P.Sravanthi, ⁶M.Sahithi

^{1,2}Associate Professor, ^{3,4,5,6}SB.Tech Final Year Student-Department of Computer Science and Engineering

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract - The cloud service in the health care zone has evolved in cost effective and suitable exchange of personal health data. Storing the personal health information to cloud is capable to theft (or) report and calls for the evaluation of method that makes sure security to the personal data. Therefore we suggest method called Enhanced Security Services to Share of Personal Health Data in the Cloud. These schemes protect Patient-Centric control on the personal health data and maintain the privacy of the PHR's. Patients store the encrypted data on the cloud servers and they provide access to different users on different parts of the health data. A semi-trusted proxy is set up and re-encryption server (SRS) is present to set up the public and private key pairs and to create the re-encryption keys. This method is secure opposed to insider warnings and implement a forward and backward access control. We formally study and confirm the working of this method with the High Level Petri Nets (HLPN). Performance assessment with regard to time consumption indicates that the personal health data methodology has the ability to securely share data in the cloud.

Index terms: Access control, security, personal health data, patient centric control.

1. INTRODUCTION

The cloud computing model showed great potential for increased cooperation intensification among many health care stakeholders as well to ensure the continued availability of health information, and scalability. Moreover, cloud computing it also integrates various important entities of health care Areas, such as patients, hospital staff including Doctors, nursing staff, pharmacies and medical laboratories individuals, insurance providers and service providers.

In general, PHR files contain information, such as: Demographic information, medical history of patients including diagnosis, allergies, past surgeries, and treatment, laboratory reports, and data on health insurance claims, and special notes for patients about some important health conditions. More formally, PHRs are managed through inter Web - based tools to allow patients to create and manage their health information as life recorders can be available for those who need access. Thus, PHRs enable patients to work effectively communicate with doctors and other caregivers report symptoms, seek advice, and maintain health records for diagnosis and treatment update from him. And PHRs either in cloud storage or in transit from patient to patient cloud or cloud to another user may be vulnerable to unauthorized access due to malicious behaviour of external entities. Moreover, there are some threats by good insiders on data. For example, PHRs either in cloud storage or in transport from the patient to the cloud or cloud to another user who may be vulnerable to unauthorized access due to malicious behaviour of external entities. Individuals working in the cloud service provider can act maliciously.

The HIPAA provides that the integrity and confidentiality of electronic health information stored by health care providers must be protected by the terms of use and disclosure and with the permission of patients. Furthermore, while PHR files are stored on third-party cloud storage, must be encrypted in a way that does not allow cloud service providers or unauthorized entities should be able to access PHRs. Instead, only entities or individuals who have the privilege of "right to know" should be able to access PHR's. In addition, the patient must administer the mechanism to grant access to PHRs to avoid unauthorized alterations or misuse of data when sent to other stakeholders in a healthy cloud environment. Many methods have been used to ensure the privacy of PHR stored on cloud servers. Privacy policies include privacy, confidentiality, authenticity, accountability, and audit experience. Confidentiality ensures that health information is completely hidden from unauthorized parties.

This methodology called Enhanced Security Services to Share of Personal Health Data in the Cloud to manage the access control mechanism for PHR administered by the patients themselves. The methodology maintains confidentiality of PHRs by restricting unauthorized users. In general, there are two types of PHR owners and non-owner PHRs, such as family members or friends of patients, doctors, doctors, representatives of health insurance companies, pharmacists and researchers. Patients as PHR owners are allowed to upload encrypted PHR files to the cloud by providing selective access to users across different parts of the PHR each member of the late user group is granted access to PHRs by PHR owners to a certain level based on the user role. The access levels for different groups of users in the access control list (ACL) are determined by the PHR owner. In contrast to the approach to achieving safe control of access to accurate, scalable and fine data in cloud computing that proposes multiple key management by PHR owners.

2. LITERATURE SURVEY

In this modern healthcare environment, the personal health data owners ready to store their personal health information in the cloud. They can determine which users shall have access to their medical record. At the same time provide the confidentiality [1] and authenticity of personal health data. In this the user wants to access the data then the cloud storage will provide the different types of keys. The re-encryption scheme is one in which the proxy possesses both parties keys simultaneously. The goal of this proxy re-encryption schemes is to avoid revealing either of the keys or the underlying plaintext to the proxy, [2] this method is not ideal. Attribute based encryption is a type of public key encryption in which the secret key of a user and the cipher text are dependent upon attribute. A crucial security aspect of ABE is collusion resistance an adversary that holds multiple keys. Now a day's data is not secure if the person wants to store the data then he will check the security [3].

Now a day's healthcare providers are moving their electronic data into the cloud. Because of security purpose and storage. Instead of building data centers we use the cloud storage. In this cloud also raise many security challenges that are authentication, identify management, access control and trust management [4]. In this the patients will maintain their personal own information stored in the cloud.

EFFICIENT CLUE-BASED ROUTE SEARCH ON ROAD NETWORKS

¹Gilla saiteja, ²Dr. R. Jegadeesan ³Bommella supraja, ⁴Kandukuri sushma, ⁵Kuragayala sushma, ⁶Devaraneni sushrutha, ⁷P.pranitha
^{1,3,4,5,6} UG Student

¹Department of Computer Science and Engineering

¹Jyothishmathi Institute of Technology and Science, Karimnagar, India

^{2,6}Associate Professor-Department of Computer Science and Engineering

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract – The advances in positioning techniques and location-based services, it is currently very common for roads networks to get textual content on the tops. The previous work identifies the optimal path that covers a series of query keywords have been studied in recent years. However, in many practical scenarios, the optimal path may not always be desirable. For example, a complete routing query is issued by providing some evidence that describes the spatial context between POIs along road, where the result can be far from optimal. Therefore, in this paper, we investigate the search problem by an idea-based list (CRS), which allows the user to provide evidence of keywords and spatial relationships. First, propose a greedy algorithm and a dynamic programming algorithm as standards. To improve efficiency, developed a branch-and-bound algorithm that eliminates unnecessary vertices in query processing. In order to quickly locate nominee, deployed an AB-tree that stores both the distance and keyword information in tree structure. To further reduce the index size, construct a PB-tree by utilizing the virtue of 2-hop label index to pin point the nominee. Broad experiments are conducted and verify the superiority of our algorithms and index structures.

Index Terms - Spatial keyword queries, clue, Point-of-Interest, travel route search, query processing.

1. INTRODUCTION

In this study a tendency to propose a completely unique question sort for spacial databases in support of travel-planning GIS applications. The target is to help users within the designing of journeys that involve many destinations, probably happiness to totally different dish classes. Supported variety of traveling rules (or constraints) that are expressed as sub-sequences of locations, users aim to find the route with the comparatively shortest traveling distance. Note that it's attainable that the traveling rules might solely involve a set of the user-requested locations .

The proliferation of on-line objects with each AN associated geo-location and a text description, the net is feat a spatial dimension. Specifically, internet users and content are progressively being geo-positioned and geo-coded. At an equivalent time, matter descriptions of points of interest, e.g., cafes and traveller attractions, are progressively turning into obtainable on the net. This development incorporate techniques that modify the assortment of information that contains both text descriptions and geo-location in order to support the efficient processing of spatial keyword queries.

To support direction-aware abstraction keyword queries, it has a tendency to devise novel direction-aware index structures to prune superfluous directions. It has a tendency to first cluster the POIs supported their distances to the bottom-left purpose of the Minimum Bounding parallelogram (MBR) that contains all POIs. Then for POIs in every cluster, it has a tendency to type them supported their directions to the bottom-left purpose. Given a question, we are able to deduce a direction vary with a lower direction sure associated an higher direction sure. It able to prove that for any dish if its direction to the bottom-left purpose isn't within the direction vary of the question, it'll not be a solution, and that will prune the dish.

Querying and manipulating giant scale graph-like information have attracted a lot of attention within the information community, due to the wide application areas of graph information, such as ranked keyword search, XML databases, bioinformatics, social network, and ontologies. The shortest path question answering in a very graph is among the elemental operations on the graph information. In a hierarchical keyword search state of affairs over structured knowledge, people typically provide scores by activity the link distance between two connected components. If over one path exists, it's fascinating to retrieve the shortest distance between them, as a result of shorter distance usually means that seniority of the connect.

2. RELATED WORK

Optimal Route Query Processing Early work on optimal route computation focuses on greedy solutions. Chen et al. [4] use the same query definition as this paper, and propose two heuristics. The first, namely NNPSR, resembles the greedy approach described in Section 1; the second retrieves the nearest point of the query start position q in every category, and then connects them to form a route. In addition, Chen et al. [4] also describe a simple combination of NNPSR and RLORD [13], which answers a special case of the optimal route query with a total order of the categories to be visited. The hybrid solution first runs NNPSR to find a greedy route; then, it extracts the category of each point on the greedy route, and runs R-LORD with this category sequence

RELIABILITY ANALYSIS FOR TESTING INFORMATION ON TWITTER: SURVEY

¹G.Sindhura, ²Dr. R. Jegadeesan ³RashmithaBhanu, ⁴S.Hanudeep, ⁵G.Srilatha

^{1,3,4}B.Tech Final Year Students

^{2,5}Associate Professor-Department of Computer Science and Engineering

^{1,2,3,4,5}Jyothishmathi Institute of Technology and Science, Karimnagar, India.

Abstract : The reliability of information on Twitter has been a subject of interest among researchers in both the computer and computer fields Social sciences, primarily because of the recent growth of this platform as a tool for information dissemination. Twitter is increasingly possible to provide virtually real-time data transfer in a cost-effective manner. It is now used as a news source among a wide range of users around the world. The beauty of this platform is that they deliver content in a timely manner the way users are able to get news related to their topics of interest. Thus, the development techniques that can verify information from Twitter are a difficult and necessary task. In this system of reliability analysis to assess the reliability of information on Twitter to prevent the spread of counterfeiting or Malicious information. This system consists of four integrated components: a reputation-based component, a Drive reliability credibility, component user experience, algorithm ranking features. The components work together in an algorithmic form to analyze and evaluate the reliability of Twitter tweets and users. We tested the performance of our system on two different data sets of 489,330 unique Twitter accounts. We applied cross-checking 10 times through four automatic learning algorithms. The results reveal that a significant balance was achieved between the recall and accuracy of the set of data tested.

IndexTerms – Credibility, Reputation, classification, user experience, feature-ranking, Twitter.

1. INTRODUCTION

ONLINE social networks, such as Twitter, have grown dramatically popular in the 21st century, where the number of users who they use it on a daily basis. Dissemination of information on these platforms are the most attractive feature, as they are known to be fast and cost effective. The fact that users allows to express themselves with little or no control another very attractive aspect of these platforms. As users enjoy the freedom to publish content without supervision, the problem of information reliability on their social networks has risen in recent years. Cunning users of these platforms spread in a harmful configuration for reasons that may not be compatible with community interest. Users are wary rumors can spread through social networks over the internet have harmful effects. The search for information reliability is thus the best solution to the problem of how to assess the appropriations of the information may be mitigating the diffusion misinformation[1]. Among many of the related challenges To examine the reliability of social networks and the Internet are

next:

1. Creates the complexity of social networks and the Internet difficulty in identifying resources for use in the study evaluation of reliability.

2. OSNs evolve dynamically in nature over time they become very large in size, with different structures that make it difficult to obtain the required information Dominates users' credibility.

3. User credibility is constantly affected by influencing factors, such as changes in social topography, User behavior erases preferences and context.

4. Malicious activities can avoid existing spam filters through different means. For example, in Twitter, malicious users Followers can buy or use tools to generate accounts and annoying tweet in the same sense But different words.

5. The process of evaluating solutions was also limit in terms of resources, given that most researchers limited in terms of the extent to which they can test them (Twitter and other OSN limitations). Thus, it is very difficult to measure user credibility in these networks and to verify their contributions. As social online networks have become more useful for disseminating information for the wider public, while confronting the above Challenges to determine the credibility of users in OSNs require development of robust user measurement techniques and content credibility.

2. RELETED WORKS

There have been many intensive studies on reliability in OSNs. In this section, the approaches were different this has been highlighted in the area of reliability research, such as human-based approach, hybrids.

2.1 Reliability of the content

In literature, there is a large range of work on the approach - based mechanism uses automated learning techniques - specifically, approaches[2] to learning under supervision. This approach includes tree resolution, Support Vector Machine (SVM) and Bayesian algorithms. Castillo[3] and other the first such search was the reliability of Twitter. The paper examined automatic ways to assess reliability by analysing popular microblogging ads topics and ratings of posts are either reliable or not reliable, using

A SURVEY ON AN EFFICIENT PRIVACY PRESERVING PROVABLE DATA POSSESSION AND DATA PROTECTION IN CLOUD STORAGE

¹G.Ranjith Kumar, ²Dr. R. Jegadeesan, ³B.Soniya, ⁴N.Arundathi, ⁵M.Saiprasanna, ⁶P.Saiprakash

^{1,2}Associate Professor- Department of Computer Science and Engineering

^{3,4,5,6}SB.Tech Final Year Student

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract : Cloud computing is an active model for providing a reliable and flexible infrastructure that enables users (data owners) to store their data and enable data consumers (users) to access data from cloud servers. This model reduces the cost of storage and maintenance to the data owner. At the same time, the data owner loses actual control and possession of data that lead to many security risks. Therefore, it is necessary to verify the service to verify the integrity of the data in the cloud. This problem has become a challenge because data ownership needs to be verified while maintaining privacy. To address these issues, this work proposes a safe and effective privacy that preserves the possession of conservation data (SEPDP). Furthermore, we are expanding SEPDP to support many owners' data dynamics and batch verification. The most attractive feature of this scheme is that the auditor can verify that the data with low arithmetic is owned.

Index Terms : Integrity verification, Storage-as-a-Service, Privacy preserving, Dynamic Auditing, Batch Auditing.

1. INTRODUCTION

Storage has emerged as a service as a commercial alternative. To store local data due to its characteristics include less initial infrastructure preparation, relief from maintenance overhead and universal access to data regardless of location and device. Although it offers many benefits like cost savings, ease of access, ease of use, synchronization and sharing, so it raises many security threats because the data is under control from the cloud service provider (CSP). CSP can be ignored. Data is rarely accessed to save space and earn more, or can lie about data loss and data corruption, as because software / hardware fails to protect its reputation. Therefore, it is necessary to verify ownership of the data Cloud Storage.

Traditional encryption solutions for integrity testing Data, either you need a local copy of the data (that is You do not have data users (DUs) or allow the DUs To download the entire data. No of these solutions It seems practical early requires one additional storage and Alternative later increases the cost of transferring files. To address this issue, several schemes including are The proposal uses unlimited verification to verify Integrity without downloading the entire data. One of the attractive features of this business is to allow the audience check to verify. With general reviewability, DUs can resort the task of auditing a third party auditor (TPA). She has Experience and abilities to impress both CSP and DU . These schemes use data acquisition to be proven (PDP) technique, which gives potential data acquisition Ensure by random verification of a few blocks to ensure it Owing data in cloud storage is not trusted.

Recently, several schemes were proposed to be allowed TPA to verify the integrity of the data stored on the unreliable cloud. These schemes have their own pros and cons. Maintaining privacy is essential to prevent TPA from being inferred data using the cloud server response during review. However, the plans proposed do not achieve Privacy preservation requirement. Despite the dynamic data an important feature to facilitate data owners to enter, Modify, and delete a certain block of data, without change the meta data of other blocks, and suggested techniques does not meet the data dynamic requirements. In the meantime, schemes such as have not been achieved batch audit requirements that ensure that TPA should be able to handle multiple numbers of concurrent verification requests from different DU s. This is The property is to save account costs and communications between CSP and TPA. Unfortunately, the charts and use of conjugated encryption Processes are an intensive calculation and need more time.

In this work, we suggest a safe and effective privacy Maintain the Conservation Data Acquisition Plan (SEPDP) Cloud storage. Operates in three stages, the key Generation and signature generation and phase review bone The attractive feature of SEPDP is that it does not use any Compute account like the existing pairing operation. in addition to, We extend SEPDP to support multiple data owners, batch Auditing, and dynamic data operations. Probabilistic Analysis Detects the integrity of the blocks stored in the CSP. We Evaluate the performance of the proposed scheme Compared with some of the current popular mechanisms. Note that the total time to check done TPA in the proposed schema is less than existing Charts. This means that SEPDP is effective and appropriate to perform verification on low-power devices.

The remainder of this paper is organized as follows. Section 2 discusses the overview of relevant business in this area. The system model and design objectives are displayed in Section 3. The proposed outline is discussed in Section 4. Annex from SEPDP to support multiple DOs, batch checking and data dynamic requirements are described in sections 5, 6 and 7 respectively. The security analysis of the proposed SEPDP is implemented in Section 8. SEPDP is evaluated in terms of performance in Section 9. Concluding remarks are made in Section 10.

SURVEY PAPER ON INFLUENTIAL NODE DISCOVERY ON DYNAMIC SOCIAL NETWORK

¹Rachakatla Satya Teja, ²Dr. R. Jegadeesan ³Kandukuri Mahathi, ⁴Amirishetti Vidya Sagar,

⁵Pulluri Sai Prasanna Rao,

⁶Chetan Mundada

¹Assistant Professor, ²Associate Professor-Computer Science & Engineering

^{3,4,5,6}B.Tech Final Year Student

^{1,2,3,4,5,6}Jyothishmathi Institute Of Technology & Science, Karimnagar, Telangana, India.

Abstract: As both informal community structure and quality of influence between people develop always, it requires to follow the influential hubs under a dynamic setting. To address this issue, we investigate the Influential Node Tracking (INT) issue as an expansion to the customary Influence Maximization issue (IM) under powerful informal organizations. While Influence Maximization issue goes for distinguishing a lot of k hubs to amplify the joint influence under one static system, INT issue centres around following a lot of influential hubs that continues augmenting the influence as the system develops. Using the smoothness of the advancement of the system structure, we propose an efficient calculation, Upper Bound Interchange Greedy (UBI) and a variation, UBI+. Rather than building the seed set from the beginning, begin from the influential seed set we find already and execute hub substitution to improve the influence inclusion. Besides, by utilizing a quick refresh strategy by figuring the peripheral increase of hubs, our calculation can scale to dynamic informal organizations with a huge number of hubs. Observational investigations on three genuine substantial scale dynamic informal organizations demonstrate that our UBI and its variations, UBI+ accomplishes better execution as far as both influence inclusion and running time.

Index Terms- Influential node tracking, substantial scale, influential maximization issue.

1 INTRODUCTION

The procedures and elements by which data and practices spread through interpersonal organizations have long interested scientists within many areas. Understanding such forms can possibly reveal insight into the human social structure, and to affect the techniques used to promote behaviours or products.

Influence expansion is the issue of choosing a little arrangement of seed hubs in an informal organization, to such an extent that their general influence on different hubs in the system, defined as per specific models of dissemination, is expanded. Promoting effort is generally not a one-time bargain, rather ventures do a continuing effort to expert bit their items by seeding influential hubs consistently. Regularly, a promoting effort may keep going for a considerable length of time or years, where the organization occasionally distributes spending plans to the chose influential clients to use the intensity of the informal impact. Under this circumstance, it is normal and essential to understand that social or data systems are dependably elements, and their topology advances continually after some time. For instance, joins show up and vanish when clients pursue/unfollow others in Twitter or companion/unfriend others in Facebook. In addition, the quality of influence also keeps changing, as you are more influenced by your companions who you contact every now and again, while the influence from a companion as a rule fades away as time slips by on the off chance that you don't contact with one another.

Therefore, a lot of hubs influential at one time may prompt poor influence inclusion after the advancement of 1 organization, which recommends that utilizing one static set as seeds crosswise over time could prompt inadmissible execution. Notably, focusing at various hubs at various time winds up fundamental for the achievement of viral advertising. We proceed to illustrate the idea of considering the dynamic perspective in influence amplification utilizing a precedent in Figure 1. In this precedent, clients are associated by edges at various time, every one of which demonstrates a client may influence over another client. Numbers over each edge give the comparing influencing probabilities. For instance, there is an edge somewhere in the range of v_1 and v_3 at $t = 0$ and the edge is erased at $t = 1$. Also, client v_1 will influence v_2 with a likelihood of 0.7 at $t = 0$, and the influencing likelihood is 0.2 at $t = 1$. This implies client v_1 would no longer influence v_3 at $t = 1$ and v_2 can't be actuated by v_1 by likelihood 0.7 at $t = 1$. Assume we are asked to find a solitary seed client to augment the normal number of influenced clients. Without any dynamic constraint, that is all the snapshots are amassed into one weighted static chart, client v_1 will be returned as the outcome. Instinctively, it is relied upon to influence Diary OF L ATEX CLASS FILES, VOL. XX, NO. X, SEPTEMBER 201X 2 the maximal number of clients among all clients. Notwithstanding, if we aim to find a single seed user that influences the maximal number of clients at various time, client v_2 will turn into the new outcome at time $t = 1$. Instinctively, this is on the ground

INQUIRY DRIVEN PATH TO ENTITY RESOLUTION

¹M.Sai charan Reddy, ²K.Mounika, ³K.Yashaswini Reddy, ⁴K.Kavya, ⁵P.Ravali, ⁶Mahesh raj
^{1,2,3,4,5} Student, ⁶Assistant Professor

¹Department of Computer Science and Engineering

¹Jyothishmathi Institute of Technology and Science, Karimnagar, India.

Abstract – This paper investigates "on-the-fly" information cleaning in the specific circumstance of a client question. An epic Query-Driven Approach (QDA) is built up that plays out a negligible number of cleaning steps that are just important to answer a given selection inquiry accurately. The complete experimental assessment of the proposed approach shows its critical favourable position as far as proficiency over conventional strategies for query driven applications for entity resolution.

Index Terms— *Query-Driven approach, QDA, Entity Resolution, Selection inquiry.*

1. INTRODUCTION

The worthiness of information quality research is persuaded by the perception that the **viability of information driven innovations**, for example, choice help apparatuses, information investigation, examination, and **logical disclosure devices** is firmly attached to the nature of information to which such strategies are connected. It is all around perceived that the result of the investigation is just as great as the information on which the investigation is performed. That is why today associations spend a considerable level of their financial plans on cleaning undertakings, for example, expelling copies, redressing mistakes, and filling missing qualities, to improve information quality preceding pushing information through the examination pipeline.

The primary commitments of this paper are:

Introduction of the inquiry driven ER issue that deliberately abuses semantics of question predicates to **decrease overhead of information cleaning**. We trust our own is the primary paper to investigate such an idea in an efficient way in the setting of SQL determination questions (Sec. 3). Introduction of the idea of vestigiality of specific calculations with regards to an answer for SQL determination questions (Sec. 4). Development of question driven systems that influence the idea of vestigiality to **lessen calculation** (Sec. 5). Extensive observational assessment of QDA. (Sec. 6). Whatever remains of this paper is sorted out as pursues. Area 2 covers the related work. An inspiring model is introduced in Section 3. The issue definition is given in Section 4. Segment 5 clarifies the idea of vestigiality. Our answer is portrayed in Section 5 and **tried in Section 6**, finally we conclude the paper in section 8.

2. RELATED WORK

Entity Resolution is a notable issue and it has received critical consideration in the writing over the past decades. The current work in this region can be found in overview On – the - fly ER. On-the-fly coordinating systems have been proposed in [6, 18,25] .The methodology in [6] answers questions by and large utilizing a two-stage "expand and resolve" calculation. It recovers the related records for an inquiry utilizing two development administrators, and afterward answers the inquiry by as it were thinking about the extricated records. A ease of an inquiry is to recover all papers composed by creator 'J. Smith'. Not at all like our work that paper does not consider improving for other sorts of determination inquiries, for example, run questions or inquiries where the kind of the condition property isn't a string. Despite the fact that the ER procedure in [18] is likewise "on-the-fly", it takes care of an alternate issue since it settle questions under information vulnerability by interfacing thoughts of record linkage and probabilistic databases. The term inquiry refers to a mix of (property name/esteem) sets and every element returned as an answer is joined by a likelihood that this element will be chosen among every single imaginable world. In [25], the creators handle element vulnerability at query time for OLAP applications. Not at all like our own.

3. NOTATION AND PROBLEM DEFINATION

We begin this segment by presenting regular ER notation in Section 3.1 . At that point, we talk about new QDA-explicit notation and formally characterize the problem in Section 3.2.

A SURVEY ON BRAIN IMAGE SEGMENTATION USING PARTICLE SWARM OPTIMIZATION

¹Komal Vyas, ²Dr. R. Jegadeesan ³K. Krishna Chaitanya Rao, ⁴Sathvik Thogaru

^{1,2,3} UG Student, ²Associate Professor

^{1,3,4} Department of Computer Science and Engineering

^{1,2,3,4} Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract – Machine learning (ML) has gained enormous application with innovation in hardware requirements for computing. The application of computer vision techniques in health care has one of the aim to reduce human judgment in diagnosis. Thus, human error in judgment may be reduced. One of the primary diagnostic and treatment evaluation tools for interpretation has been magnetic resonance imaging (MRI). In fact MRI characteristics will help the doctor to avoid the human error in manual interpretation of medical content where the smallest aberrances in the human body can be identified. More preferred contrast information about brain tissues is provided by Magnetic Resonance imaging (MRI). MR images can also be used to determine normal and abnormal types of brain. Brain related diagnosis demands at most care and a minute error in judgment may be disastrous. This makes medical imaging very important field. Various imaging methods like CT Scans, X-Ray, and MRI are available but MRI is the most reliable and safe. In fact medical image segmentation is a complex and challenging task due to the intrinsic nature of the images which involves separating the tumor and organisms out of the medical data. Brain tumor segmentation from Magnetic Resonance Imaging (MRI) scans has an important role in the early tumor diagnosis and radiotherapy planning. In the proposed paper we evaluate using Particle Swam Optimization algorithm of medical image segmentation.

Index Terms – MRI, Image Segmentation, Particle Swarm Optimization, Principal component Analysis.

I. INTRODUCTION

The abnormal growth of the tissues is known as the tumor. It is an abnormal mass of tissues that grow and subconsciously multiply cells. Brain tumors can be of any kind, such as primary, diffuse, malignant or benign. In the previous days, PSO can be used to perform simple and extended function for real-time applications such as medical image processing applications, industrial applications, satellite image processing and others. PSO is based on the concept of intelligence squadron. Partitioning is the process of dividing the image into regions with similar properties such as grayscale, color, brightness, and contrast. There are a variety of ways available for segmentation.

Many algorithms have been developed to improve them, such as simulation simulation algorithms, genetic algorithms, ant colony improvement algorithms, and particle optimization algorithms. Swarm Intelligence is an artificial intelligence technology focused on studying the collective behavior of a simple agent system. These factors interact with each other locally and with the environment, leading to the emergence of global patterns. There are many similar types of systems in nature, for example, honey bees, bacteria and animal grazing. Two models of the Enemy Intelligence, Ant Colony Optimization and Optimal Optimization, have already been successfully applied to solve optimization problems in pattern classification and image analysis.

The PSO technique described by Kennedy and Eberhardt, particle swarm algorithms mimics the social behavior of insects. People interact with each other as they learn from their own experience, gradually moving from the population to better areas of the problem. In a PSO system, particles fly in a multidimensional search space. During the journey, each particle adjusts its location according to its own experience and according to the adjacent particle experiment, taking advantage of the best position it and its neighbor face.

II. LITERATURE REVIEW

Bond Marzena & Khalid Saeed [1] explained about automatic detecting system as well as identifying accurate location of tumor by using MRI images. In this process he obtained two algorithms that is image processing and the other one is image segmentation. Through this image processing obtained the highest effectiveness of the algorithm. Important phases are classified into contrast enhancement, Wiener filtering and skull stripping, the main intention behind this technique is to mark label boxes according the type of the tissue that it belongs to white matter, Grey matter and brain tumor. The overall performance of this algorithm is reliable while dealing with various brain images.

Varuna Shree, N. & Kumar, T.N.R. explained about how the medical images will consume time & tedious and also it is not that easy to identify the abnormal structures of the human brain using simple imaging techniques [2]. Also focused on the approaches of removal of noise in the images. A potential neural network matrix was used to train and test the accuracy of performance in tumor site detection in MRI images of the brain. The experimental results achieved a nearly 100% accuracy in the identification of natural and abnormal tissues from MR images demonstrating the effectiveness of the proposed technique.

A COMPARATIVE STUDY ON BRAIN TUMOR DETECTION USING IMAGE PROCESSING K-MEANS AND EM ALGORITHM

¹Dr.S. Prabakaran, ²Dr. R. Jegadeesan ³B.Madhav, ⁴K.Laxmi priyanka ⁵T.Aishwarya
^{1,2},Assoc.prof, ^{2,3,4}Under Graduate B.Tech Final Year Students-Computer Science and Engineering,
^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract :In this paper, we propose a comparative hybrid model for the detection of brain tumors based on the image processing, k-means,EM models . The K-Means algorithm is used to divide the image into K groups based on the distance between the pixels. Each group is grouped by the group center point, i.e., a centroid. In order to avoid inefficiency we use image processing. To remove the unwanted information (noise, film artifacts in MRI) in the original MRI image we use the pre-processing technique. We use the segmentation to extract a certain area of the image. We distribute an image to small parts and analyze information in a digital format. We use the extraction feature where some parameters are considered to extract features such as configuration, shape (shape), size and location of the image. Quality metrics such as PSNR is calculated to extract the features. With regard to the results obtained from extraction properties we perform the tumor classification process. We EM algorithm which is a general technique for maximum likelihood estimation or maximum a posteriori when there is a missing or unknown data.. Finally we compare the results obtained from K-Means and EM algorithms and propose a best algorithm to detect the brain tumor .These techniques can then be applied to predict brain tumor detection at an early stage.

IndexTerms - Pre processing, brain tumor, feature extraction, classification, MRI, support vector machine.

I. INTRODUCTION

A brain tumor is a group, or a block, of abnormal cells in your brain. Brain tumors can be cancerous (malignant) or non-cancerous (benign). Brain tumors are classified as primary or secondary. A major brain tumor develops in your brain. Secondary brain tumor, also known as transitional brain tumor, occurs when cancer cells spread in the brain of another organ, such as the lung or breast. Secondary brain tumors form the majority of cases of brain cancer. Diagnosing a brain tumor begins with physical examination and a look at your medical history. Physical examination includes a detailed neurological examination. These can include CT, and MRI scans of your head. Magnetic resonance imaging (MRI) differs from CT scan because it does not use radiation, and it does not. It generally provides more detailed images of the brain structures themselves.

More than 700,000 Americans live with a brain tumor today. Approximately 80,000 people will be diagnosed with a major brain tumor this year. Approximately one-third (32 percent) of brain tumors and central nervous system (CNS) are malignancies. About 28,000 children in the United States are fighting brain tumors now. This year, nearly 16,000 people will die as a result of a brain tumor. Survival after diagnosis with primary brain tumor differs significantly by age, tumor type, location, and molecular markers. Brain tumors are the second most common type of cancer among children 0-14. More than 4,600 children and adolescents aged 0-19 will be diagnosed with a major brain tumor this year. Brain tumors and the central nervous system are the third most common type of cancer among adolescents and young people (ages 15 to 39) and the third most common cause of cancer death in this age group. The rate of incidence of central nervous system tumors in India ranges from 5 to 10 per 1,000,000 people with an increasing trend and represents 2% of malignancies. South India reported 15 years of experience involving 1043 patients.

Brain tumor detection of MRI images involves various stages such as processing, extracting parameters, chopping and grading. Classification is the last step in the brain tumor detection process where we implement the k-mean algorithm to divide brain images of MRI. The purpose of this study is to improve the accuracy of the detection of brain tumors using image processing tools and reduce the time taken to calculate the steps followed so that the image of the brain MRI can be identified as malignant or benign at the least time for the calculation .

ONLINE RAILWAY RESERVATION BASED ON VOICE

¹N.Anuhya, ²Dr. R. Jegadeesan ³H.Roshini, ⁴K.Nikhil, ⁵G.Tejaswi, ⁶G.Sindhusha

^{1,3,4,5}B tech Final Year Student

²Associate Professor ⁶Assistant Professor-CSE
Information Technology

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract: This study has been undertaken to provide railway reservation services with a feasible solution to the end users in an easy way and the users can interact with the system through voice. This paper aims at providing service to the people. This Information is to be integrated into the existing database of the system but the access to it would be restricted to the authorized or register users. According to the user the service will be received and navigate to a particular option which has been selected.

Index Terms – Voice XML, IVR system, text-to-speech (TTS), HTTP, servlets, speech browser, speech recognition engine, voice, SIP Phone.

1. INTRODUCTION

The main aim of the project is "Voice-based railway reservation" which providing railway reservation services with a feasible solution to the end users in an easy way and the users can interact with the system through voice. To overcome all the difficulties of the existing system we have proposed the whole system automated and the development of the new automated system contains the following activities, which try to automate the entire process keeping in view of the database integration approach. The main objective of our project is to reduce the manual work required by the public complaint systems and replace the troublesome work by smart work by introducing an automated system using voice. The future scope of this project would be to implement more services to the customers. The current system scenario is whenever the users want to know the details of railway reservation the need to go for nearest railway reservation center and reserve the tickets by filling the form and submitting them by stand in the queue. By using the online we can perform the reservation which can be accessed through the internet.

Limitations

- ✓ The increasing complexity
- ✓ It is time-consuming process
- ✓ The illiterate people cannot access the services.

Proposed System

This Voice Based Railway Reservation providing the feasible solution to the end users in an easy way and they can access the services through voice. And this system makes the overall task much easier and flexible. Users can get information about trains and also the availability of tickets. And users can get the alerts on their mobile. They can pay the amount through online and also they can cancel their tickets.

Advantages

- ✓ Time reducing process.
- ✓ 24x7 availability.
- ✓ Easy to access the services.
- ✓ It providing the services in an effective manner.

2 LITERATURE SURVEY

1.XML based Interactive Voice Response System

The paper presents the architecture of a web-based interactive voice response system using Voice XML. The paper includes a discussion on the architecture of the IVR system, its components, and a detailed description of the functionality of VXML Interpreter and its use in IVR systems. It also describes the integration of VXML Interpreter, CCXML. Finally, it presents performance measurement techniques and technical proposal for increasing the performance of such a system.

2.A survey paper on - Online Ticket Substantiation using QR Code based Android Application System.

However, there is no proper efficient system for which we can deal with these problems like lack of communication between onboard staff and control room(emergency conditions) passengers who don't carry ticket along with IDs, waiting list passengers without the ticket and the passengers who buy tickets from Ticket Collector. This paper purposes the new system that integrates all the services provided by Indian railways.they are centralized system for management of databases,android apps for this by which all works of them can be done digitally like authentication seat allocation checking using app which scans Qr code on the ticket and verifies QR code information with the database.

3.A Study on Customer (Passenger) Satisfaction in Transportation

This study mainly aims in understanding(the best zones in the Indian railways) the passengers level of satisfaction in terms of service quality offered by the southern railways.as the southern railways are considered to be one of the best zones In Indian railways.for the purpose, 194 responses were captured by the sampling method.

4.Smart Rail Reservation and Verification System with Unique Identification in IoT using Cloud Database

The Internet of Things is inter-networking of physical devices, buildings, and other items which are embedded with electronics, software, sensors, actuator, and network connectivity that enable these objects to collect and exchange data. The devices which

QUANTIZATION OF ONLINE PRODUCTS USING APPROXIMATE NEAREST NEIGHBOUR SEARCH

¹V. Malsoru, ²Dr. R. Jegadeesan ³G. Bhargavi, ⁴G. Sachin, ⁵N. Mounika
^{2,3,4}Under Graduate Student B.Tech
^{1,2}Associate Professor
^{3,4,5}Information Technology
^{1,2}Computer Science and Engineering Department,
^{1,2,3,4,5}Jyothishmathi Institute of Technology and Science, Karimnagar, India.

Abstract:

Approximate nearest neighbor searching algorithms has achieved superior success in addition tasks. The existing well-liked methods for ANN search, like hashing and division. These methods are designed for static databases only. They cannot handle well we tend to address the matter by developing a web product division (online PQ) model and incrementally updating the division codebook that accommodates to the incoming streaming knowledge. Moreover, to additional alleviate the problem of large scale computation for the web PQ update; we tend to style to budget constraints for the model to update partial PQ codebook Instead of all. We tend to derive a loss sure that guarantees the performance of our on-line PQ model. Moreover, we tend to develop a web PQ model over a window with each knowledge insertion and deletion supported, to replicate the period behavior of the Data. The experiments demonstrate that our on-line PQ model is each time-efficient and effective for ANN search in dynamic giant scale databases compared with baseline strategies and also the plan of partial PQ codebook update additional reduces the update price

Index Terms—Online indexing model, product quantization

1. Introduction

Generally, data {processing} (sometimes known as information or information discovery) is that the process of analyzing information from totally different views and summarizing it into helpful data - data which will be accustomed increase revenue, cuts costs, or both. data processing computer code is one in every of variety of analytical tools for analyzing information. It permits users to investigate information from many various dimensions or angles, reason it, and summarize the relationships known. Technically, data {processing} is that the process of finding correlations or patterns among dozens of fields in giant relative databases.

How Data Mining Works?

While large-scale info technology has been evolving separate group action and analytical systems, data processing provides the link between the 2. data processing code analyzes relationships and patterns in keep group action information supported open-ended user queries. many kinds of analytical code square measure available: applied mathematics, machine learning, and neural networks. Generally, any of four types of relationships are sought.

Classes:

Stored knowledge is employed to find knowledge in preset teams. as an example, a chain may mine client purchase knowledge to work out once customers visit and what they generally order. This data may be wont to increase traffic by having daily specials.

Clusters:

Data things square measure sorted consistent with logical relationships or shopper preferences. as an example, information may be well-mined to spot market segments or shopper affinities.

Associations: Data is deep-mined to spot associations. The beer-diaper example is associate degree example of associative mining.

Sequential patterns: Data is well-mined to anticipate behavior patterns and trends. for instance, an outside instrumentation distributor may predict the probability of a backpack being purchased supported a consumer's purchase of sleeping baggage and hiking shoes.

TRIAGE PREDICTION OF HOSPITAL ADMISSION FROM EMERGENCY DEPARTMENT

¹S.Manisha, ²Dr. R. Jegadeesan ³P.Sai Krishna, ⁴A.Jyothi, ⁵N.Sai Nikhil, ⁶N.Mahesh

^{1,3,4,5,6}Students of Information Technology, ^{2,5}Associate Professor
Jyothishmathi Institute of Technology and Science, Karimnaga, India.

ABSTRACT: The Emergency Department of a medical center in Taiwan cooperated to conduct the research. A predictive model of triage system is constructed from the contract procedure, selection of parameters to sample screening. 2,000 pieces of data needed for the patients is chosen randomly by the computer. After three categorizations of data mining (Multi-group Discriminant Analysis, Multinomial Logistic Regression, Back-propagation Neural Networks), it is found that Back-propagation Neural Networks can best distinguish the patients' extent of emergency, and the accuracy rate can reach to as high as 95.1%. The Back-propagation Neural Networks that has the highest accuracy rate is simulated into the triage acuity expert system in this research. Data mining applied to the predictive model of the triage acuity expert system can be updated regularly for both the improvement of the system and for education training, and will not be affected by subjective factors.

Keywords: Back-propagation Neural Networks, Data Mining, Emergency Department, Triage System.

I. INTRODUCTION

Emergency Department is the frontline for hospital to face patients in emergencies. The members in Emergency Department include the doctors, nursing staff, technicians, social workers, emergency medical technicians, administrative staff, fellow workers, and volunteers. This department runs 24 hours a day, and no matter first aids, observation and surgical operations can all be conducted here. It is like a small hospital in the hospital. Xin-Kai Zhou [1] points out in his research that Emergency Department is the hospital's first line of the medical care service, and is also the place where people go to for timely medical service when they face emergencies. Hence, the medical care service quality and the appropriate allocation of resources are very important to both the public and the hospital. The so-called Triage System is based on the Appraisal Standards of Emergency Departments from Department of Health, DOH, Executive Yuan, Taiwan, (2009) [2], and there are 4 levels of the triage system for emergency patients: Level 1 (should be treated immediately); Level 2 (should be treated within 20 minutes); Level 3 (should be treated within an hour), and Level 4 (treatment can be held). The meaning of the "consistency" referred in this research means: "After the triage done by the nursing staff and the diagnosis and treatment from the doctors, the percentage of those in the same level is generally presented in accuracy rate". Currently, the decision making of triage in domestic hospitals is mostly made by senior triage nurses (referred as nursing staff below). A research result shows that the accuracy rate of the consistency between the triage system and the doctors' diagnose and treatment reached to 87% (Wollaston et al.) [3].

The research conducted on the nursing staff and the pediatricians by Russo et al. [4] also indicated that the accuracy rate of the triage consistency reaches to 84%. It is obvious that the consistency of decision making in triage still leaves some room to improve, and on the other hand, the statistics also means that every day, nearly 2,423 patients are over triaged or under triaged because of the triage system and this causes waste of medical care resources and infringement of the patients' rights (J.Y. Zhan) [5]. Moreover, the process of decision making is easily affected by the complexity of work, conflicts, nursing experiences, education and professional knowledge (Brillman, Doezema, & Tandberg) [6]. Hence, the more emergency patients are, the more complexity the diseases becomes. When facing the mission of triage, how to give consideration to the consistency and robustness of the decision making is the task to concern in this research. Data mining is used for the application to the predictive model of triage system in this research, in attempt to enhance the triage consistency and robustness through an expert system.

The "Predictive Model of triage system" and "Predictive Model of Data Mining" are categorized and organized by means of the visit process and the current situation of the triage in this medical center. On one hand, the parameters with diagnostic meanings clinically are found through this predictive model of triage system. On the other hand, the concrete steps need to be taken can be defined through predicative model of data mining. After the confirmation and approval from the emergency department, the samples needed retrieved from the patients database of this emergency department are sorted and organized for necessary processing of information.

A. Predictive Model of Data Mining

There are many tools to choose from in data mining. Discriminant Analysis, Logistic Regression, and Artificial Neural Network are adopted in this research. Multi-group Discriminant Analysis and the Discriminant Analysis share the same purpose. Because the Discriminant Analysis is often used to compare with other categorization technologies, Multi-group Discriminate Analysis is also adopted in this research as the comparison basis (Sharda & Delen) [13]. Logistic Regression can divide the research results into two categories through a game theory (Such as: Success-Failure). Since categorical dependent variables are included in the parameters of this research, Multi-group Discriminant Analysis is chosen as the tool for triage. Since this is a multi-group triage in this research, the structure of date can be more complex, Back-propagation Neural Networks that can use non-linear transfer function is adopted as the triage tool, in an attempt to obtain predictive information with better accuracy rate for triage (Heidar, Nicolaos, & Mahesh) [14]. The predictive model for date mining is shown in Fig. 1. To enhance the credibility of the research, increase the accuracy rate of triage, the data is divided into the training group and testing group before analysis and 10-fold cross-validation is conducted.

Extraction of geo location from twitter messages

¹K.Soumya, ²Dr. R. Jegadeesan ³G.Spandana, ⁴P.Manisai, ⁵Dr.S.Prabakaran,

^{1,2,3}Students B.Tech Final of Information Technology, ⁴Associate Professor
Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract : The popularity of social media over the past many years, particularly sites like Twitter, has conferred associate network for up to the minute data on events across the world. the data conferred on these sites are often very useful within the case of associate emergency, however, the immense quantity of information to look at and therefore the low adoption of geo-tagging on this website makes it troublesome, if not possible, for emergency services to reply to data gathered from social media. Taking this into thought, this paper presents a signal of thought for distinguishing and retrieving totally different geo-locations from Tweets and extracting the GPS coordinates from this information to or so plot them in an exceedingly map. Twitter may be a wide unfold small blogging platform that permits users to broadcast short, 140-character messages (Tweets) through socially-networked channels of listeners. Twitter subscribe the Tweet broadcasts of alternative Twitter by —following them. Broadcast Tweets ar sent resolute followers in update streams and may be accessed in real time or hold on for later viewing . this massive active user base of Twitter and therefore the immense quantity {of data|of data|of knowledge} that flows through it on a daily basis makes it an excellent place for gathering and analyzing information. With the geo tag data hooked up to Tweets, Twitter permits developers the flexibility to resolve geographic coordinates; there's additionally a precedent for utilizing Twitter just in case of associate emergency as shown in creating Twitter a helpful resource. during this paper, we tend to use Twitter as our information supply to extract and predict totally different geo-locations from user generated Tweets. we tend to enforced a graphical program (GUI) , as a basic paradigm for the planned location predictor. the ultimate goal of this work is to supply a tool for emergency management in things wherever Emergency Response groups (ERT) are unreachable; permitting Twitter to become a second viable choice to contact somebody for facilitate.

I. INTRODUCTION

Tweets square measure terribly answerable for real-world events, and, generally even a lot of immediate than ancient news channels. during a survey, a matter was asked to the individuals "whom they contacted in AN emergency?"; 28% of individuals replied to twitter for facilitate. If they're unable to achieve the emergency contact variety. Twitter provides three location info fields. they're user location, place name, and geo coordinate. during this thirty four you look after users don't reveal "user location". The second Field is on behalf of me "place name", which may be hooked up to a tweet once it's affixed. the name is portrayed by location name boundary coordinates. The third Field provided by Twitter is geo-coordinates may be hooked up to the time of posting a tweet employing a GPS modify the system. In these location int from these tweet text extracted by mistreatment 2 approaches, they're the gazetteers-based approach. In these varied Model, many mechanical device learning models, like RNN and CNN.RNN is nice for serial long text information. Tweets have short sentences, that favor the utilization of CNN over RNN notice whether or not a tweet contact a location name

If there square measure location names gift during a tweet excluding location fields that square measure mentioned on top of, individuals additionally use location reference in tweets at the time of asking facilitate square measure reportage a disaster. largely we discover that folks within the area use location reference in tweets to urge the assistance. This info is extremely abundant helpful throughout emergencies. the placement reference acts as proof for emergency cases. {we can|we will|we square measure able to} extract the placement from the tweet mistreatment dictionary primarily based approach There are many issues with this approach

Gazetteers don't seem to be offered all told the locations the placement name within the text might also produce other non-geo graphic meanings however this approach is helpful for well written English sentences, however coming back to tweets, as they need naming grammatical mistakes it doesn't work expeditiously. By this approach, we have a tendency to square measure largely concentrating on location words ignoring different named words. thence for this purpose rather than mistreatment POS tagging, we have a tendency to use graphical computer program. this huge active user base of Twitter and therefore the large quantity {of info|of data|of knowledge} that flows through it every day makes it a good place for gathering and analyzing information. With the geo tag info hooked up to Tweets, Twitter permits developers the flexibility to resolve geographic coordinates; there's additionally a precedent for utilizing Twitter just in case of AN emergency as shown in creating Twitter a helpful resource. during this paper, we have a tendency to use Twitter as our

AN EFFECTIVE COLLABORATIVE FILTERING FOR UNPREFERED ITEMS BY USING L- INJECTION

¹V.Swathi Kiran,²Dr.M.Sujatha,³Dr. R. Jegadeesan 4K.Srikanth Reddy,⁵K.Vishalini Reddy,⁶A.Bhavani

^{1,4,5,6}Final year Students Of Information Technology,^{2,3}Associate Professor-CSE

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology & Science, Karimnagar,India.

ABSTRACT: In recent years there has been a dramatic increase in the amount of online content. Recommender systems form a specific type of Information Filtering (IF) technique. To date a number of recommendation algorithms have been proposed, where collaborative filtering is one of the most famous and adopted recommendation technique. Collaborative filtering recommender systems recommend items by identifying other users with similar taste and use their opinions for recommendation. In the last decade, the amount of customers and online information has grown rapidly, yielding the big data analysis problem for recommender systems. Consequently, traditional recommender systems often suffer from scalability and inefficiency problems when processing or analysing such large-scale data. Due to this, the implementation of these algorithms on single node machine is time consuming and fail to meet the computing requirement of large data sets. Distributed processing of big data across multiple clusters of nodes can help to improve the performance in such cases. In this paper, the former collaborative filtering recommendation algorithm is designed to parallel on MapReduce framework and uses Pearson correlation as similarity metric. Apache Hadoop is parallel distributed framework. Hadoop distributed file system(HDFS) allows distributed processing of big data across multiple clusters of nodes.

Key Words: Recommendation, Collaborative filtering, Pearson correlation, Apache Mahout, Hadoop

I. INTRODUCTION

In recent years, the volume of data present online has grown exponentially. A major portion of this data is related to internet-based different platforms. The evaluation of such data and/or the extraction of information is difficult due to its huge volume. It is cumbersome for an individual or an organization to obtain the desired results in a timely manner. Hiring the right talent is a challenge faced by all companies. This challenge is amplified by the high volume of applicants if the business is labor intensive, growing and faces high attrition rates. One example of such a business is IT services run out of growth markets. In a typical services organization, professionals with varied technical skills and business domain expertise are hired and assigned to projects to solve customer problems. In the past few years, IT services including consulting, software development, technical support and IT outsourcing has witnessed explosive growth, especially in growth markets like India and China. For in-stance, according to a NASSCOM (National Association of Software and Services Companies of India) study, the total number of IT and IT enabled services professionals in India has grown from 284000 in 1999-2000 to over 1 million in 2004-2005 [1]. More recent estimates suggest that this industry employs more than 2 million professionals in India alone. For organizations in the IT Services business, growth in business is synonymous with growth in the number of employees and recruitment is a key function. Hiring large number of IT professionals in growth markets poses unique challenges. Most countries in growth markets have large populations of qualified technical people who all aspire to be part of the explosive growth in the IT Services industries. Thus, a job posting for a Java programmer can easily attract many tens of thousands of applications in a few weeks. Most IT Services companies are inundated with hundreds of thousands of applicants. For example, Infosys, one of the largest IT Outsourcing companies in India, received more than 1.3 million job applications in 2009. However, only 1% of them were hired. To give the context for work, consider a typical recruitment process. This is illustrated in Figure. The process starts when a business unit decides to hire employees to meet its business objectives. The business unit creates a job pro le that specifies the role, job category, essential skills, location of the opening and a brief job description detailing the nature of work. It might also specify the total work experience that the prospective employee should possess, along with the desired experience level for each skill. The job openings are advertised through multiple channels like on {line job portals, newspaper advertisements, etc. Candidates who are interested to apply for the job opening upload their profile through a designated web-site. The website typically provides an on{line form where the candidate enters details about her application like personal information,[2] education and experience details, skills, etc. We call this Candidate Meta {data. The candidates can also upload their resumes through the website. The objective of allowing the candidate to enter meta {data in an on{ line form is to capture the information in a more structured format to facilitate automated analysis. However, real life experience suggests that most candidates do not specify a lot of information in the on [3]{line forms and hence Candidate Meta{data is often incomplete} Once the applications of prospective candidates are received, they are subjected to careful scrutiny by a set of dedicated screeners. It is shown in the below figure 1.

ADVANCED APPROACH FOR DETECTING SPAMMERS IN TWITTER

¹J.Veenasa, ²Dr. R. Jegadeesan ³P.Pravalika, ⁴B.Aravind, ⁵P.Prasad, ⁶CH.Srinivas

^{1,3,4,5} Students of Information Technology, ^{2,6} Associate Professor

^{1,2,3,4,5,6} Jyothishmathi Institute of Technology and Science, Karimnagar, India.

Abstract: Twitter is one in all the foremost in style microblogging services, that is mostly wont to share news and updates through short messages restricted to 280 characters. However, its open nature and enormous user base are often exploited by machine-controlled spammers, content polluters, and alternative ill-intended users to commit numerous cyber crimes, like cyberbullying, trolling, rumor dissemination, and stalking. consequently, variety of approaches are projected by researchers to handle these issues. However, most of those approaches are supported user characterization and fully regardless mutual interactions. during this study, we tend to gift a hybrid approach for police work machine-controlled spammers by amalgamating community primarily based options with alternative feature classes, specifically metadata-, content-, and interaction-based options. The novelty of the projected approach lies within the characterization of users supported their interactions with their followers on condition that a user will evade options that are associated with his/her own activities, however evading those supported the followers is tough. Nineteen completely different options, as well as six recently outlined options and 2 redefined features, are known for learning 3 classifiers, namely, random forest, call tree, and Bayesian network, on a true dataset that includes benign users and spammers. The discrimination power of various feature classes is additionally analyzed, and interaction- and community-based options are determined to be the foremost effective for spam detection, whereas metadata-based options are established to be the smallest amount effective.

Index Terms: Social network analysis, Spammer detection, Spambot detection, Social network Security

I. INTRODUCTION

OSN(online social network) is a social network which is used to build social networks and is used for sharing of personal career interest etc,one can register in this by providing some information such as name,gender etc...

A.OSN & Social spam problem

Twitter was found in 2006,which is used to post something like expressing thoughts & personal information in the form of tweet which is limited to 280 characters. This Twitter is useful to follow, the politicians, athletes ,celebrities and news channels and user should subscribe without any delay.If he/she gets subscribed then the status update will be noticed.These OSN& Twitterare used for gentle purposes,there are open nature & large user base & there is rapid increase in message, that leads for fruitful for cyber criminals. There are different types of cyber crimes such as cyberbullying(sending messages indirectly), misinformation stalking(approach stealthily) & there are cyber attacks like spamming, phishing (sensitive information retrieval). A report in which submitted on AUG 2014 to us securities & exchange commission ,it indicates that 14% of twitter accounts are spam bots & approxiamte 9.3% of all tweets are spam. Spam bot is also called as social bots, there is to gain trust to exploit the harm activities.There should be great trust to be received in a network and evade for harmful activities.There spammers are the kind users,that are able to affect the networks and trust for various activities.

II. RELATED WORKS

Identity deception in social media applications has negatively compact on-line communities and it's probably to extend because the social media user population grows. The ease of generating new accounts on social media has exacerbated the problem. Many previous studies have been posited that focused on both verbal, non-verbal and network data. The method may be applied to varied kinds of social media applications and produces high accuracy in distinguishing deceptive accounts at the time of tried entry to a subcommunity. Performance results also as limitations for the tactic area unit given. It follows on the identification of attainable implications of this study for social media applications and future directions on deception hindrance area unit planned [1].Peer-to-peer and different decentralised, distributed systems area unit illustrious to be significantly liable to sybil attacks. In a sybil attack, a user obtains multiple fake identities and pretends to have various nodes in the system.This presents Sybil Guard, a novel protocol for limiting the corruptive influences of sybil attacks. Our protocol is predicated on the "social network" among user identities, the edge indicates a human-established trust relationship. Malicious users will produce several identities however few trust relationships. Thus, there's a disproportionately tiny "cut" within the graph between the sybil nodes and also the honest nodes. Sybil Guard exploits this property to sure the amount of identities a malicious user will produce. We show the effectiveness of SybilGuard use analyzing[2].Traditional defense mechanisms for fighting against automatic faux accounts in on-line social networks area unit victim-agnostic.Even though victims of faux accounts play a crucial role within the viability of ensuant attacks, there's no work on utilizing this insight to boost the establishment. There is a tend to take the primary step and propose to include predictions regarding victims of unknown accounts to existing ones. In explicit, it had tend to investigated however such associate integration may lead to a lot of strong faux account defense mechanisms. It was conjointly used real-world datasets from Facebook the feasibility of predicting victims of faux accounts victimisation supervised machine learning [3].Social networking has become a well-liked manner for users to fulfill and move online. Users pay a major quantity of your time on fashionable social network platforms (such as Facebook, MySpace, or Twitter), storing and sluring a wealth of non-public info. This information can be passed over thousands of persons, also attracts the interest of cybercriminals. There is a tendency to analyze to that extent spam has entered social networks. There are various set of "honey-profiles" on three large

An Efficient and Secure Data Retrieval for Scalable Military Networks

¹Ch.Keerthi, ²Dr. R. Jegadeesan ³V.Priya, ⁴T.Akhila, ⁵B.Pavan Sai, ⁶V.Neelima

^{1,3,4,5} Students of Information Technology, ^{2,5} Associate Professor

^{1,2,3,4,5,6} Jyothishmathi Institute of Technology and Science

Abstract : Mobile nodes in military environments such as a battle field or a hostile region are possible to attack from intermittent network property and frequent partitions. Disruption-tolerant network technologies are turning into self-made solutions that permit wireless devices carried by troopers to communicate with one another and access the direction or command dependably by exploiting memory device nodes. A number of the foremost difficult problems in this state of affairs are the social control of authorization policies and the policies update for secure knowledge retrieval. Cipher text policy attribute-based encoding may be a promising cryptological answer to the access management problems. However, the matter of applying cipher text-policy attribute-based encoding in suburbanised disruption tolerant networks introduces many security and privacy challenges with relevancy the attribute revocation, key escrow, and coordination of attributes issued from multiple authorities. Secure knowledge retrieval theme is proposed to victimization cipher text-policy attribute-based encoding for suburbanised disruption-tolerant network wherever multiple key authorities manage their attributes severally and also demonstrate a way to apply the planned mechanism to firmly and with efficiency manage the confidential knowledge is confined within the disruption-tolerant military network.

IndexTerms - Access control, attribute based encryption (ABE), disruption tolerant network(DTN), multi-authority, secure data retrieval.

I. INTRODUCTION

In military networks, connection of mobile nodes can be disconnected by jamming, environmental factors and mobility and specially when they are operated in hostile field. Disruption Tolerant Network technologies able nodes to communicate with each other even in extreme networking environments [1]. When their is no connection between source and destination pairs, the messages sent from source nodes need to wait in the intermediate nodes for some time until the connection is established.

Storage nodes in DTNs [2] are introduced to store the data so that only authorized mobile nodes can access the information. To secure the confidential data it need high protection including access control methods that supports cryptographic schemes [3]. Data access policies are defined over user attributes which can manage key authorities. DTN architecture is also referred where multiple authorities issue and manage their own attribute keys independently as decentralized DTN [4].

Attribute-based encryption(ABE) [5] fulfills the requirements for secure data retrieval in DTNs. It enables access control over encrypted data using access policies and described attributes among private key and cipher text. Cipher text-policy ABE(CP-ABE) provides a scalable way for encryption where encryptor defines attribute set so that decryptor can easily decrypt the cipher text [6]. So, that different users can decrypt data with security policy.

The problem of applying the ABE to DTNs introduce security and privacy challenges so that users may change their attributes at some point or some private keys will be compressed, to need systems secure, key revocation is needed. This issue is more difficult in ABE systems, since multiple users share the same attribute. This shows that revocation of that particular attribute would effect on each user in a group.

Key escrow is another challenge. In CP-ABE, key authority generates the private key of user by considering the authority master key to the user which is associated with set of attributes. So, the key authority can decrypt any cipher text which is assigned to user by using the general attribute keys. The compression of key authority the potential threat for privacy especially when the data is highly sensitive. This is a key problem even in multiple authority systems until each key authority have its own attribute keys with own master secrets. So, such key generation mechanism based on the single master secret removes key escrow in single or multiple authority CP-ABE.

The coordination of attributes issued from multiple authorities is the last challenge. Authorities can manage to issue attribute keys to the user independently by using their own master secrets. But the multiple authorities is impossible to issue an attribute and it is very hard to define fine grained access policy. The multiple authorities can use AND, OR logic schemes. But the OR logic scheme cannot be implemented. From this the different authorities can generate their own attribute keys using their own independent master secret key. Every authority have their own individuality. So, the "n-outof-m" scheme cannot be expressed in any previous schemes, because it is very practical and commonly required access policy logic.

2. RELATED WORK

In key-policy Attribute Based Encryption (KP-ABE), the encryptor only gets to describe a cipher text with set of attributes. Each user will be chosen a policy by the key authority that shows which cipher text the user can decrypt and issues key for each user by embedding the policy into the user's key. The roles of cipher texts and keys are reversed in cipher text-policy Attribute Based Encryption (CP-ABE) that means the cipher text is encrypted by the policy that is chosen by encryptor, but the key is created related

PREDICTION OF ROAD TRAFFIC FROM MULTIPLE SOURCES USING GAUSSIAN APPROACH

¹D. Srinivas, ²Dr. R. Jegadeesan, ³R. Ravali, ⁴J. Sai Priya, ⁵CH.Anirudh

^{1,2}Associate Professor, ^{3,4,5} Final Year B.Tech Student

Department of Computer Science and Engineering

^{1,2,3,4,5,6}Jyothishmathi Institute of Technology and Science, Karimnagar, Telangana.

Abstract

Prediction of road traffic from multiple sources using Gaussian approach is most important in intelligent transport systems. Existing works are only focused on non-intrusive sensors that are very expensive. Sensors are detecting traffic conditions and image recognition etc. The maintenance of these sensors is very difficult. To address the issue, this paper aims to improve road traffic speed prediction by using tweet sensors and social media. This includes many challenges, including location uncertainty of low-resolution data, language ambiguity of traffic description in text etc. To respond to these challenges we provide a uniform modeling probabilistic framework called Topic Enhanced Gaussian Aggregation model (TEGAM). It consists of three components: location disaggregation model, traffic topic model, Traffic speed Gaussian model.

Index Terms: Gaussian process, multiple-sources.

I. INTRODUCTION

Transportation system is most important now-a-days system. Existing works are mainly focused on very expensive they are using cameras, image recognition tools. Existing techniques are not fit for the current road conditions. To address this issue in this paper we introduce,

Social media:

This is related to websites. ex: Face book, twitter. People are exchanging the information by using these social media. Messages are sent about the traffic conditions. Such as stuck in traffic road no.22 are posted by the driver, passengers these can be viewed by the sensors. Meanwhile it is a traffic authority registered on public accounts and post messages to inform public about traffic status.

Car trajectory data:

Car trajectory data is getting the location in which the application is installed in the driver's cellphone. It is used to map the location. For ex: We can take uber, ola cabs and google maps which is used to navigate the location. This makes the travelling easier and comfortable. If the origin destination (OD) is passed on a map, then the route will be mapped from source to the destination with the time (min, sec). According to origin destination, trajectory is a sequence of links in which the segments of a road is divided. The travelling time of a road link is so called trajectory travel time. If the road link is congested, then it may take longer trajectory travel time with longer traffic speed.

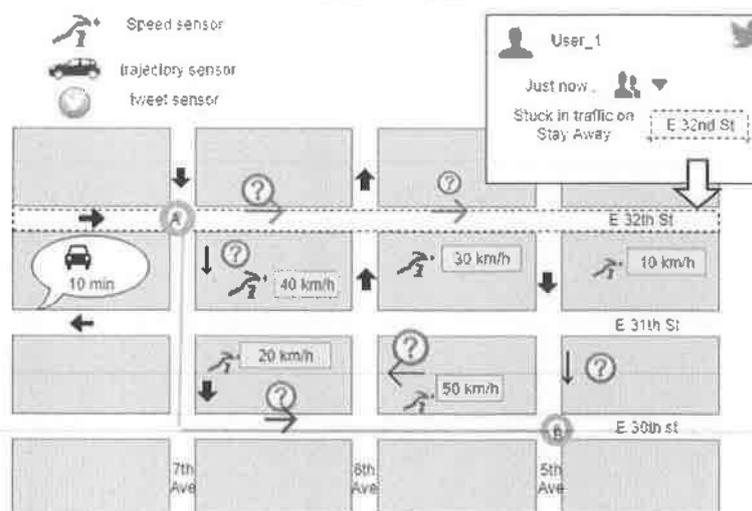


Fig1: System Architecture

High Throughput Data Transfer using Wireless Network Dynamic Metric Computation in Multicast Protocol

¹Dr R. Jegadeesan, Associate Professor, Jyothishmathi Institute of Technology & Science, Karimnagar, India,

²J. Abirami, Research Scholar, Anna University, Chennai, India.

Abstract

Wireless Mesh Network is most challenging technology in specifically security. While transfer the large files over very high bandwidth network paths by multicast protocol is becoming more and more challenging area. Recent High throughput multicast protocols are achieving limited throughput and bandwidth allocation due to adversary metric computation. To overcome this issue we proposed a Secure High Throughput Dynamic Metric Multicast Protocol (SMRP). In addition to this, the algorithm which accomplish Dynamic Multilevel Priority (DMP) packet scheduling scheme, in the scheme, each node, except those at the last level of the virtual hierarchy in the zone based topology of WMN, has three levels of priority queues. (i) Real-time packets are placed into the highest-priority queue and can preempt data packets in other queues (ii) Non-real-time packets are placed into two other queues based on a certain threshold of their estimated processing time and (iii) Leaf nodes have two queues for real-time and non-real-time data packets since they do not receive data from other nodes and thus, reduce end-to-end delay. In this paper we describe and evaluate the secure High Throughput Dynamic metric multicast Protocol SMRP which is designed to be reliable, to achieve high throughput and to maintain an adjustable level in WMN. Reliability is achieved through the use of efficient forward error correction. High throughput is achieved by eliminating the need for acknowledgment-based pacing from the receiver.

Index Term: WMN, SMRP, Metrics, Secure Message Transmission, Rate guard technique

I. INTRODUCTION

Wireless mesh networks (WMNs) emerged as a promising technology that offers low-cost high-bandwidth community wireless services. A WMN consists of a set of stationary wireless routers that form a multi hop backbone, and a set of mobile clients that communicate via the wireless backbone.

Numerous applications envisioned to be deployed in WMNs, such as webcast, distance learning, online games, video conferencing, and multimedia broadcasting, follow a pattern where one or more sources disseminate data to a group of changing receivers. These applications can benefit from the service provided by multicast routing protocols. Multicast routing protocols deliver data from a source to multiple destinations organized in a multicast group. Recent work in multicast routing for wireless mesh networks has focused on metrics that estimate link quality to maximize throughput.

Nodes must collaborate in order to compute the path metric and forward data. The assumption that all nodes are honest and behave correctly during metric computation, propagation, and aggregation, as well as during data forwarding, leads to unexpected consequences in adversarial networks where compromised nodes act maliciously.

In this work, we identify novel attacks against high throughput multicast protocols in wireless mesh networks. The attacks exploit the local estimation and global aggregation of the metric to allow attackers to attract a large amount of traffic. We show that these attacks are very effective against multicast protocols based on high-throughput metrics.

We conclude that aggressive path selection is a double-edged sword: While it maximizes throughput, it also increases attack effectiveness in the absence of defense mechanisms.

Our approach to defend against the identified attacks combines measurement-based detection and accusation-based reaction techniques. The solution accommodates transient network variations and is resilient against attempts to exploit the defense mechanism itself. A detailed security analysis of our defense scheme establishes bounds on the impact of attacks.

We demonstrate both the attacks and our defense using ODMRP, a representative multicast protocol for wireless mesh networks, and SPP, an adaptation of the well-known ETX unicast metric to the multicast setting.

II. EXISTING SYSTEM

Several protocols like GeoTORA, Core-Assisted Mesh Protocol, On-Demand Multicast Routing Protocol (ODMRP), Multicast Ad Hoc On-demand Distance Vector (MAODV) routing protocol were proposed to provide multicast services for multi hop wireless networks. These protocols were proposed for mobile ad hoc networks (MANETs), focusing primarily on network connectivity and using the number of hops (or hop count) as the route selection metric.

Instead, given the stationary nature of WMNs, recent protocols focus on maximizing path throughput by selecting paths based on metrics that capture the quality of the wireless links. During route discovery, a node estimates the cost of the path by combining its own measured metric of adjacent links with the path cost accumulated on the route discovery packet. The path with the best metric is then selected. High-throughput protocols require the nodes to collaborate in order to derive the path metric, thus relying on the assumption that

HANDOVER SCHEME FOR GSM BASED DEVICE-TO-DEVICE ULTRA DENSE NETWORKS

¹Dr.S.Prabaharan, ² Dr.R.Jegadeesan

^{1,2}Associate Professor, Dept. Of Computer Science & Engineering

^{1,2}Jyothishmathi Institute of Technology & Science, Karimnagar, India

Abstrac: Internet of things (IoT) is expected to have billions of heterogeneously connected devices, demanding higher spectral efficiency, enhanced capacity and lesser latency. Device-to-Device (D2D) ultra-dense networks (UDN) are one of the potential components of 5G. Due to smaller cell sizes, more frequent handovers should be executed by the system. The devices should be always connected to the best network, while achieving seamless mobility. The handover failure leads to packet loss and degrades the quality of service (QoS). The unessential handover leads to wastage of resources. In this work, a vertical half handover (VHO) scheme is proposed for D2D-UDN. The proposed scheme dynamically selects two thresholds, which enables the system to maintain probability of VHO failure and probability of unessential handover below the desired bounds than the other conventional schemes.

IndexTerms-Device-to-Device (D2D), Heterogeneous networks (HetNet), Probability of unessential VHO, Probability of VHO failure, Ultra-dense networks (UDN).

I. INTRODUCTION

The increases in the number of devices (smart phones, tablets, etc.) tend to overload the core and access networks. The growth in data traffic over the years is displayed in Fig. 1 [1]. One of the major challenges experienced by telecom operators is huge traffic demand from evolved node B (eNB). The traffic offloading can be done by providing alternate paths to the loaded paths [2]. Third generation partnership project (3GPP) Release 12 discusses two offloading techniques like UDN and D2D communication [3]. D2D offloads traffic at both core and radio access networks. This enhances the network capacity. Small cells are also the efficient solution for traffic offloading [4]. The competition for resources decrease with the cell size becoming smaller over the generations. The deployment of more number of low power small cells results in UDNs. This enables frequency reuse and controls interference [5]. The different types of small cells defined in 3GPP Release 12 are listed in Table 1 [6].

Table 1. Comparison of 3GPP Release 12 small cells [6].

	Suitable environment	Deployment	Cell size	Capacity (Number of users supported)	Backhaul	Cost
Micro	Outdoor	Operator	250 m to 1 km	32 to 200	Operator	\$47,185
Pico	Hotspot	Operator	100 m to 300 m	32 to 64	Operator	\$13,865
Femto	Indoor	Consumer	10 m to 50 m	8 to 10	Consumer	\$100

Small cells along with D2D play a major role in offloading the traffic from eNB [7]. Small cells offload the hot spot traffic, whereas D2D offloads traffic for proximity services. In International mobile telecommunication standard (IMT-2020), this combination is expected to reduce delays and increase data rates within the networks [8]. D2D communication in UDNs and its applications are illustrated in Fig. 2. In Table 2, D2D is compared with the other short-range wireless transmission schemes [9].

The devices undergoing D2D communication may enter into the adjacent cells at some point. Due to this, the devices may not be in proximity. This may breakdown the connection between D2D devices and leading to a severe quality loss. Thus, handover in D2D communication is a challenging issue [10]. Handover in D2D is classified into half handover and joint handover [11].

When one of the devices in D2D communication moves away from the other device, the link between them may breakdown. To maintain seamless connectivity, one of devices is handed over to the neighboring network. This procedure is called half handover. These two devices are now connected by the cellular links. The process of half handover is explained in Figs. 3 and 4. When both the devices in D2D communication moves away from the current network, the link quality from the current network becomes weaker. To maintain call connectivity, both the devices are jointly handed over to the target network, which is termed as joint handover. A target network based handover selection method is proposed in [12] for composite radio environments. This algorithm uses received signal strength (RSS), required bit rate, delay, available system bandwidth and cost in decision making process. But the handover latency increases with the increase in available access points.

MACHINE LEARNING TECHNIQUES USED TO IDENTIFY LUNG CANCER

¹Dr.M. Sujatha, ²S. Prabhakar

Associate Professor, Assistant Professor

Department of Computer Science Engineering

¹Jyothishmathi Institute of Technological Science, Nustulapur, Karimnagar, India

² University College of Engineering and Technology for Women, Kakatiya University Campus, India

Abstract

A novel approach for lung cancer analysed pulmonary nodules to predict the disease of the patients. Lung cancer dataset is implemented by using machine learning to assist physicians in handling non-specific. These systems can decrease variation in classifying nodules to achieve decision-making and decrease the number of good nodules which are unnecessarily acted upon. In this paper, provides an overview of predicting lung cancer proposed Machine Learning Techniques for Lung cancer (MLTLC) so far and emphasis on strengths and weaknesses. Machine learning algorithms implemented challenges in building and validating lung cancer dataset taken from UCI repository. The proposed method conducted the experiment on Lung cancer to reduce the inconsistencies. The proposed MLTLC method compared with remaining machine learning classifiers.

Index Terms - Data preprocessing, Machine learning, Random Forest, Neural Network.

1. INTRODUCTION

The United States National Pulmonary Examination is reduced to 20% of lung cancer [1]. In the beginning of detection of any type of cancer is of paramount importance to pave the way for successful cancer treatment. Unfortunately, most cancers are only detected once they reach an advanced and incurable stage. Individuals who are victims of many types of cancer do not know about it until it's too late.

The important challenges is the process of discovering common knowledge of process data in machine learning [2]. Data taken directly from the raw data may have dirty data, errors, or more importantly, they are not ready to implement the data. So, pre-processing Lung cancer data is required in data mining to proceed further. The Lung Cancer dataset contains missing values. The Lung cancer dataset is pre-processed, by imputing missing values based Machine learning techniques. Moreover, the increasing heap of data in the applications of cognitive science, industry and modern business calls for the needs of more complex tools for analysis[3]. Thanks to the pre-processing of the data, it is possible to transform the impossible to possible, adapt the data to meet the input need for every data extraction algorithm. Data pre-processing involves data reduction techniques that aim to reduce data complexity, detect or remove irrelevant, inconsistent, dirty and noisy data[4].

Many people do not even go to the doctor to get themselves checked for several reasons, which can include, affordability, fear, travelling cost or even time. Everyone is so absorbed in their work that they disregard the possibility of having cancer, even after the symptoms start to manifest. Hence, this was one of the driving factors for us to make such an application [5]. To be able to measure how much of a societal impact it can have we need to evaluate its impact on both general users and doctors. Therefore, by focusing on just UAE-based users, our proposed application is predicted to have a significant impact on the country as a whole. By focusing on the patient-specific aspect of LCPS, it becomes more apparent why having a tailored prediction, that is specific to the patient's health, is important. It gives the oncologist and patient room to forecast and define a targeted treatment process, helping in better patient care and improving the patient's chances of survival. Thus, having such a system will decrease lung cancer death cases significantly, especially since there are no similar systems in the market.

Of the myriad opportunities for use of Machine Learning in clinical practice, medical imaging workflows are most likely to be impacted in the near term. Machine learning-driven algorithms that automatically process 2- or 3-dimensional image scans to identify clinical signs (e.g., tumors or lesions) or determine likely diagnoses have been published and some are progressing through regulatory steps toward the market[6]. Many of these use deep learning, a form of ML based on layered representations of variables, referred to as neural networks.

2.LITERATURE SURVEY

Maryam Aljanabi et al[7] build an efficient predictive model on heart disease. The machine-learning algorithm is used to pre-processed heart disease data to get better diagnosis results. In this paper, Artificial Neural Network achieved more accuracy compared to Decision Tree. Definitely, the machine learning techniques analyzed of heart disease for patients diagnosis.

Yomna Omar et al[8], treated cancer is a challenge task to detect the disease is in an advanced stage or early stage. They focused on UAE-based users, to predict significance of cancer on the country. By focusing on the patient-specific aspect of LCPS, it becomes more apparent why having a tailored prediction, that is specific to the patient's health, is important.

M.Akhiljabbbar et al.[9] has been tested with 6 medical data sets and 1 non medical data set. Out of 7 data sets, 6 data sets were chosen from UCI Repository and heart disease A.P was taken from various corporate hospitals in Andhra Pradesh, and attributes are selected based on opinion from expert doctor's advice.

To understand how deep learning methods leverage image data to perform recognition tasks, imagine you are entering a dark room and looking for the light switch. From past experience, you have learned to associate light switches with predictable locations within the configuration of a room[10]. Many computer vision-based image processing algorithms, including deep learning, mimic this behavior to identify factors that are associated with the recognition task at hand. Deep learning is especially powerful in its ability to interpret images because of the complexity of the factors it can consider [11].

AN EFFICIENT AND SECURED DATA LOSS PREVENTION USING HYBRID CRYPTOSYSTEM FOR CLOUD DATA STORAGE

¹ Dr. Chalasani Srinivas, and ²Dr. R. Jegadeesan

^{1,2}Associate Professor-Computer Science and Engineering

^{1,2}Jyothishmathi Institute of Technology and Science, Karimnagar, India. 505481

Abstract— Distributed computing has transformed into a key bit of a substantial segment of the private and open affiliations and being used for data storing and recuperation. There are various utilization of appropriated registering and comprehensively used in exceedingly mystery national organizations like military and treasury for securing private information. The dispersed processing for example Google drive, Amazon Web Service and Microsoft Azure are important for affiliations and end-customers. Using Cloud figuring and its organizations, affiliation/end-customers can store their data. There are distinctive troubles while saving affiliations especially grouped records in servers. Accordingly, the objective of this paper is to give a strange state structure to a limit system enlarging security and individual assurance. Disregarding the way that servers are significantly verified against unapproved access, there are scenes where private archives secured on servers are gotten to by the upkeep staffs. Along these lines this examination paper gives at an early stage structure to totally affirmation of records set away in the server by using Hybrid Cryptosystem In this paper we are finding the sensitive information from the archive and it should encode by the cancellation encoding after that it's mixed by the using MD5 for lingering data it should mixed by the sha-1 by then joined the data and set away into the cloud.

Keywords — Cryptography, Encryption, Decryption, Security

INTRODUCTION

The cloud is notable to store data and reports in view of the low costs, less help and direct section from any zone. Beside the private and open affiliations, citizen driven associations are scanning for cloud based limit and organizations for their mystery data amassing. Each cloud provider like Microsoft Azure, IBM, Amazon Web Services (AWS) and various others have given their own special strategy to encode and disentangle the data. The dispersed processing is extensively used in private and open organizations associations for putting away colossal measure of information which can be made accessible from any area. The utilization of cloud is found in industry, military colleges, and private affiliations. The data set away on the cloud is open by

customer affirmation anyway for mystery get to various layer of security is executed. The estimation of this distinctive layer security is dependent on the element of assurance. To give the response for different components of security, cryptography and steganography frameworks are notable. Distinctive counts must be melded to improve the element of security in data accumulating. New system, using symmetric key cryptography estimation and steganography is proposed in this work.

II. LITERATURE REVIEW AND EXISTING SYSTEM

Data Security Issues [5] are essential issue in the present system. In light of responsiveness and multi-inhabitant characteristics of the cloud, the regular security segments are never again suitable for applications and data in cloud. A bit of the issues are as following:

1. Due to dynamic adaptability, organization and territory straightforwardness features of disseminated figuring model, a wide scope of utilization and data of the cloud arrange have no settled structure and security limits. If there should be an occurrence of security break, it is difficult to separate a particular resource that has a hazard or has been endangered.
2. As indicated by advantage transport models of Cloud handling, resources and cloud organizations may be controlled by different providers. As there is a beyond reconciliation situation, it is difficult to send a bound together wellbeing exertion.
3. Because of the straightforwardness of cloud and sharing virtualized resources by multitenant, customer data may be gotten to by other unapproved customers.

The word cryptography suggests changing the message data into a blended code which can be recuperated back on open framework. Cryptography procedure stays the fragile information in unbound transmission frameworks and which can be scrutinized by arranged recipient. A cryptography count needs a key close by a message of any design to outline the figure content. The element of security of figure content depends upon the nature of cryptographic computation and assurance of the cryptographic key used. Along these lines the main

Mobile Agent Data Aggregation Technique for Wireless Sensor Networks

¹Dr.Srinivas Dava

¹Associate Professor, Dept. Of Computer Science & Engineering

¹Jyothishmathi Institute of Technology & Science, Karimnagar, India

Abstract:

The efficient energy would always have an importance at the time of scheming networks of wireless sensor. Introducing the technology of mobile agent in the networks of the wireless sensor for the sake of collaborative signal and processing information has been delivered the new choice to process efficient and data aggregation. Mobile agent based scattered figuring paradigm which would offer plentiful advantages over the prevailing and they are normally utilized client/server calculating paradigm in the networks of wireless sensor. Recently the mobile agent (MA) was recommended to offer a solution which is substitute for the data which is traditional that gather in Wireless Sensor Networks (WSNs). Mobile agent achieves the data processing task and aggregation of the data at the level of node rather than at the sink, hence, rejecting the terminated network overhead. The most vital challenges in paradigm which is mobile agent-based is an itinerary scheduling for an agent traversal. We initiated a fuzzy with agent of dynamic mobile which is based on the data aggregation approach (FuMADA) that would be considering efficient energy, lifetime of network, end to end postponement and ration of aggregation at the time of a taking a decision of the movement of data agent in the multi-hop network of sensor. As our method that consider 3 parameters: energy that is remaining, distance, and the number of neighbours. The experiments of simulation would be shown that FuMADA system enhances the successful MA round-trip rate and the lifetime of network. Additionally, an initiated FuMADA method outperforms the algorithms that are

compared in the energy distribution terms utilization among nodes.

Keywords: Wireless Sensor Networks, Routing algorithms, Mobile agent-based data aggregation, Mobile agent, Dynamic itinerary, Energy consumption, Network lifetime, FuMADA.

I. Introduction

The current developments and advances in the micro-electro system of field mechanical and communications that are wireless have paved a path for Wireless Sensor Networks (WSN). WSN are been here to be known as one of the important zones of study as of their capabilities for altering the way of interaction amidst the world of physical and human. In the past several years, WSN would have been twisted to be an immense interest matter. WSN is a modest network with a tiny infrastructure, that consist of a numerous tiny node of sensor with an energy that is computational and limited ability. Sensor nodes in WSN are deployed densely in varied conditions of environment also used to notice the aspects such as pressure, temperature, humidity etc. [1, 2].

The distributed as well as dense systems have capacity to perform tough inferences and tasks which would replace the traditional centralized architectures at a rate of prodigious. A Distributed Sensor Network (DSN) is a pooling of numerous homogenous or heterogeneous nodes of sensor that are logically distributed, spatially or geographically over a location of interest and linked by a network [3]. The sensors which collect the data repeatedly from their environments,

PERFORMANCE EVALUATION OF K-MEDDOIDS TECHNIQUE FOR NODE CLUSTERING IN WSN ROUTING SYSTEM SIBER-DELTA

V. Neelima¹, A. R. Naseer² and G. Narsimha³

¹Department of Computer Science and Engineering, JITS Karimnagar affiliated to JNTUH, India

²School of Computer and Information Engineering, INHA University Korea and Tashkent

³Department of Computer Science and Engineering, JNTUH Hyderabad, Telangana, India

Abstract—Wireless sensor networks (WSNs) have become a very hot research area in recent years, as a result of their wide potential applications such as military surveillance, agricultural monitoring, industrial and smart home with multimedia sensors to accumulate visual data such as image or video. In general, energy consumption is one of the biggest challenging research issues for WSNs since the tiny sensor nodes cannot be easily re-energized after random deployment. In this paper, an efficient energy reduction method is proposed and is applied to SIBER-DELTA model in order to reduce energy consumption and to prolong network lifetime. Swarm Intelligence based Efficient Trust Aware Routing protocol for Wireless Sensor Networks termed as SIBER-DELTA considers trust rating of the nodes along with energy, distance, link quality of the path to select the best quality path from source to sink for packet forwarding. SIBER-DELTA is a flat routing protocol. One of the trendy scenarios to reduce energy consumption for WSNs is the implementation of clustering technique. The main initiative of this process is to provide efficient energy saving method for WSNs. To get the outstanding result of clustering, K-medoids clustering algorithm is employed to compute the optimal medoids between sensor nodes. Subsequently, suitable cluster heads are selected. By distributing the load among the clusters, energy efficiency can be enhanced and network lifetime can be increased efficiently. Simulation results prove the outperformance of proposed SIBER-DELTA with K-Medoids when compared to the existing SIBER-DELTA model in terms of energy consumption and network lifetime.

Keywords: Wireless Sensor Networks; K-Medoids Clustering algorithm, SIBER-DELTA, Energy Balancing, Network life maximization, Swarm Intelligence

I. INTRODUCTION

Due to the tiny inexpensive sensors deployed in Wireless Sensor Networks, to provide cost-effective solutions to a wide range of real world challenges, WSNs have gained immense popularity in industry, military, society and academia [1]. WSNs have been deployed in various scenarios to perform wide variety of functions including climate auditing, military surveillance, forest wildlife monitoring, earthquake monitoring, target tracking, infrastructure evaluation, health inspection, precision agriculture, and also Internet of Thing (IoT) [2-5]. WSNs consist of large number of tiny and low-cost sensor nodes. These sensors are self-organized, which can form a multi-hop network adaptively and transmit the compressed data to base station [6, 7]. With the growth of WSNs, multimedia WSNs have been extensively applied. Transmitting Multimedia data like image or video is the characteristic of multimedia wireless sensor networks, and more visual information can be collected in military surveillance, industrial and agricultural monitoring, healthcare and smart home etc. [8]. The size of multimedia data is usually large and as a result more amount of energy will be consumed. Power saving is one of the most essential factors for sensor nodes to extend their life span in WSNs. Most of the energy consumption involves data packets transmitting and receiving. Due to a large number of sensor nodes, battery cannot be recharged easily, and the power becomes the most expensive resource for each sensor node. Thus, the energy consumption plays a vital role in wireless sensor networks. This can be achieved by using K-Medoids Clustering Algorithm when compared to other clustering protocols.

Rough Set Attribute Reduction with Support Vector Machine for Prediction of Heart Disease

¹Ravindar Mogili, ²Dr. G.Narsimha, ³Mahesh Nagamalla

^{1,3}Associate Professor, ²Professor

^{1,3}Department of Computer Science and Engineering, Jyothishmathi Institute of Technology & Science, Karimnagar, Telangana State, India

² Department of Computer Science and Engineering, Jawaharlal Nehru Technological University, Hyderabad, Telangana State, India

Abstract. Analysis of health data helps the doctors in decision making. As the continuously addition of daily generated data, analysis becomes more complicated. Besides this it also requires more memory space and computation time. The analysis process made simple by normalizing huge data, i.e., removing the redundant and useless data for analysis. The Rough Set Attribute Reduction (RSAR) calculates reducts of full set attributes and generate minimal attributes set. This is given as input to the Support Vector Machine. The SVM can analyze diagnosis model of health data and predicts the class of data item, i.e., disease stage. The objective of this paper is to improve classification accuracy of the health data by combining RSAR and SVM.

Keywords: Medical data, Rough set, Attribute reduction, Support vector Machine, Classification, Heart disease

1 Introduction

Data mining is the science of extracting and refining useful information from large databases. It is the process of searching concealed information that can be transformed into knowledge, thus could be used for strategic decision making. Application of data mining techniques in health care has become increasingly popular since it offers benefits to Doctors, patients and healthcare organizations.

The heart purifies and pumps blood into blood vessels and these vessels deliver the purified blood to all over the body and also carry impure blood to the heart. Heart diseases commonly known as cardiovascular diseases (CVD) occur due to abnormal blood flow from the heart. As per WHO reports, maximum of all human deaths around the globe are due to chronic disease like heart Diseases. The early stage detection of chronic disease is more important since the risk factor increases as the detection is delayed. Therefore, detecting cardiac abnormalities at the early stage can reduce the mortality rate. But, the diagnosis of the heart disease by a medical specialist is a challenging task due to requirement of prior knowledge with good skills. This task can be simplified with the help of machine learning methods. The machine learning methods are used to develop prediction model by analyzing existing health data. Different classification algorithms have been used with a number of attributes for prediction of class. One of the most popular machine learning techniques is support vector machines (SVM) [1][2]. When a new data item is given as input to the classification model, it predicts the class of data item, i.e., stage of disease. The objective of this paper is to improve the prediction accuracy using SVM by preprocessing health datasets with Rough Set Attribute Reduction (RSAR) [3]. The basic organization of the paper is arranged in 5 sections as follows: Section 2 presents the overview of the Support Vector Machines and also describes about Rough Set Attribute Reduction, Section 3 describes the proposed hybrid model for classification, Section 4 presents the experiment and results and the conclusions are given in section 5.

2 Review of Literature and Concepts

Aa Evanthia et al. [4] investigated heart disease prediction by using three machine learning strategies namely neural network, SVM, regression trees and claimed that SVM is generating better performance than other two models. Srinivas Konda [5] proposed a rough-fuzzy classifier to predict the heart disease failure by combining rough set theory with the fuzzy set to enhance the prediction performance. Das et al. [6] proposed Neural Networks ensemble model by combining the posterior probabilities from multiple models such as Naive Bayes, MLP, C4.5, AIRS, etc. Tan et al. [7] proposed a hybrid model to predict heart failure disease using Support Vector Machine and Genetic Algorithm. Mai Shouman et al. [8] proposed a model by using support vector machine for predicting heart disease and generated accuracy of 84.1%. Heon Gyu Lee et al. [9] used Bayesian classification, associative classifier, classification based on multiple association rule (CMAR), C4.5 (DT) and SVM for predicting coronary artery diseases. Accuracy of SVM, CMAR, C4.5 were 90%, 80% and 78% respectively. SVM showed the best performance. Besides the availability of huge health data, every day large amount of health data is generated. All the parties associated with health sector such as patients, doctors, health organizations are benefited, if the health data is analyzed and fruitful information is generated. But due to availability of huge data, analysis becomes more complicated [10]. In order to simplify the complexity of analysis, data reductions methods such as rough set theory is used. Later analysis is done by SVM and a classification model is developed. The overview of SVM and attribute reduction using rough set is discussed in the below.

A SURVEY ON: BLUETOOTH LOW ENERGY MESH BASED COMMUNICATION NETWORK

¹N.Mahesh, and ²Dr. R. Jegadeesan

^{1,2}Associate Professor-CSE

^{1,2}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract

Bluetooth technology has evolved wireless communication between devices with its pervasive and basic features. With the advancement of technology, the classic Bluetooth transformed into Bluetooth Low Energy (BLE) in version 4.2 and 5. Initially, BLE 4.2 was featured to support star topology network provisioned with less network coverage. Subsequently, in contrast with version 4.2, BLE 5 has the capability for mesh topology that has increased the network coverage and enhanced end to end diversity. Due to its low power and low-cost characteristics, it is competing with other IoT mesh enabled technologies. Also, BLE special features has played significant part in the fruition of its uses like high speed automotive devices, IT and medical equipment's etc. More so, BLE can be utilized in the hospitals for effective communication as Bluetooth enabled devices are easily available and reliable due to mesh topology support feature. In view of aforesaid, in this paper we have proposed a BLE (Bluetooth 5.0) mesh-based communication network architecture and protocol for the hospital consisting of BLE fixed and mobile nodes.

Keywords: Bluetooth Low Energy (BLE), BLE5, Mesh Network, Ad-Hoc Network, Hospital

Introduction

Bluetooth Low Energy (BLE) has emerged to be a foremost low power wireless technology. Moreover, BLE technology was introduced in Bluetooth 4.0 version in which BLE network design followed the star topology. However, this version suffered range limitation problem due to lack of mesh topology support. Moreover, in the absence of the aforesaid feature, the technology such as IEEE 802.15.4 (ZigBee etc.) has been utilized to support the mesh network. Nevertheless, Bluetooth Sig launched Bluetooth 5.0 provisioned with mesh capability in race with other mesh technologies to support long range communication. Nowadays, the technologists are more biased towards the technologies supporting mesh topologies and low power consumption for better network efficiency. In view of aforesaid, in this paper, we are proposing and discussing the BLE 5 Mesh Based Hospital Communication Network (B5MBHCN) protocol to support the staff as well as an indoor and outdoor patient.

The rest of the paper is organized in a way that in Section 2, the use case for B5MBHCN is discussed. In Section 3, the related works are discussed while Section 4 will debate on the potential available technologies for B5MBHCN. Moreover, Section 5 will be a brief discussion on existing topologies for mesh network. Furthermore, Section 6 is about the proposed network architecture for B5MBHCN protocol. Moreover, Section 7 will be about the security in BLE networks. Subsequently, in Section 8, B5MBHCN protocol security features are described. Finally, Section 9 will give a brief related to the proposed protocol implementation and Section 10 will conclude the paper.

1. Use Case B5MBHCN

A Wireless Ad-hoc Networks (WAHN) are becoming popular day by day due its unique feature such as it requires no infrastructure and low power for the communication. Moreover, due its exceptional characteristics, the communication can be possible in difficult situations like earthquake, fire or in case of other accidents. Additionally, in case of hospitals this infrastructure less communication is necessary to cater for with the emergency situations for example to call the staff in emergency or normal condition from one location to another, medical equipment authentication, message transfer, patient convenience for getting different kind of information after entering the hospital vicinity. Subsequently, in the event of any disaster, the communication in the hospital becomes the most important to deal with the injured people or others. For making the WAHN possible for the hospitals, there are many available technologies such as ZigBee, Z-Wave, Threads, BLE etc. (as discussed in Section 4.). In view of aforesaid, after the detailed research, in this paper, we have found Bluetooth Low Energy 5 (BLE 5) to be the best suited technology for the proposed B5MBHCN due to its easy availability in mobile devices, low power, low cost and mesh support characteristic. Also, after deep literature review, we have come up with the conclusion that till to date there is no Pure Mesh Solution using BLE is available. In view of aforesaid, we are proposing a pure mesh based BLE protocol targeting the hospital (being the most critical place dealing with emergencies) where efficient and reliable communication is required.

To ensure pure mesh B5MBHCN we will focus on mesh nodes mobility, message transmission controlling, topology auto-configuration, mesh connection stability and fast handovers.

2. Related Works

The use of wireless devices and equipment has increased enormously due to rapid progression in wireless technologies. Moreover, with the passage of time, the WAHN is becoming very popular as it does not require infrastructure and thus low cost for design and development. New technologies such as ZigBee, XBee, LoRA, WiMax, BLE etc are being introduced in the market to get more efficiency. BLE 5 technology is becoming a stronger candidate due its low power consumption and mesh support.

A SURVEY ON: AN IMPROVED ENERGY EFFICIENT PROTOCOL FOR WIRELESS SENSOR NETWORKS

¹P.Balakishan, and ²Dr. R. Jegadeesan

^{1,2}Associate Professor-CSE

^{1,2}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract

The wireless sensor networks have been experiencing exponential growth in the past decade. A wireless sensor network (WSN) provides low cost solutions and consists of several sensors distributed across a geographical area. In many commercial and industrial applications, it often needs to monitor and collect the information about the environment conditions (temperature, humidity, vibration, acceleration etc.) by using sensor networks. Recharging or replacing sensors batteries in a large geographical environment is not a feasible task. In this paper we have identified important issues pertaining to energy consumption of wireless sensor network (WSN). Also, we aim to resolve issues relating to excessive multi-hopping from one node to another and propose an addressing scheme refer to a node that can also be used for signal spreading and de-spreading and a protocol to minimize power usage. The proposed Improved Energy Efficient Communication Protocol (IEECP), comprises of moveable sinks and sensors node that can be randomly deployed in the network. Proposed protocol is compared with the two existing protocols namely Tree Routing (TR) and Enhanced Tree Routing (ETR). The simulation results show that the proposed protocol has the lowest hop-count compare to TR and ETR. And reduces hop-count, excessive multi-hopping and prevents flooding of path search messages in a dense sensor network, and thus saves energy of the sensor nodes.

Keywords: Wireless sensor network, Improved Energy Efficient Communication Protocol, Tree Routing, Extended Tree Routing, Non-Orthogonal Variable Spreading Factor Technique

1. Introduction

Wireless sensor network (WSN) has less bandwidth, short range and small data processing capability, while traditional networks have large range, more storage capacity and more data processing capability. A sensor network has slow processing devices. Now days a wide variety of applications make utilization of wireless sensor networks. Therefore, we need more efficient protocols and algorithms for routing, communication and data security. Main challenges of WSN are physical constraints, fault-tolerance, ad-hoc wireless deployment, scalability, QoS service, unattended operation, un-tethered and data Security. Physical constraint like battery power, storage and computational power are commonly known to a sensor network. Since sensors are supplied with the limited battery power, Hence, the energy consumption is main design constraint to a protocol and it depends on network size as well as routing algorithms. [1].

Due to physical constraints like physical damage or lack of power supply a sensor node may fail, so the protocol must accommodate changes like node failure, topology changes etc. [4]. The battery backup of sensor node is limited so network cycle as well as throughput of network is low [2]. Consumption of energy in WSN has been optimized by cross-layer design method, using this it is easily know about the network nodes, also cross-layer design method improves the network performance [3].

The deployment of sensors can vary from hundreds to thousands or to more, as per the application need. Thus, the protocols must be scalable enough to respond and operate with such large number of sensor nodes [5]. In some scenario, sensors once deployed can work for a longer time without any human intervention. Hence, the nodes themselves should be reconurable, adaptable to the new topology changes. The sensors have a fixed source of energy and have no external power supply; therefore, they must be optimally used for processing and communication. Since sensor networks work on low bandwidth, data security becomes a key issue in WSNs. Security in sensor networks must consider critical parameters for its design [2].

The energy consumption, QoS and overall performance of a routing protocol depends on the architectural model and design of the sensor network. Energy plays a vital role in designing a network infrastructure and route processing for data transmission. In a large sensor network, duplicate data generation by different sensor nodes is a common problem. The problem is resolved with the help of aggregation function [6].

The aggregation function eliminates duplicate data, by using functions such as min, max, suppression and average. As WSN are deployed in hostile areas such as battle fields, forests etc. The data collected is highly significant therefore; protection of the data is one of the major concerned. The communication protocols should incorporate security features for data transmission. Depending on the application type, the sensor network topology can be designed statically or dynamically [7].

The static architecture has a fix path from each sensor node to the sink node and thus consumes less energy, bandwidth etc. In deterministic approach, data routing, topology implementation and network management is easy and predictable, while in case of self-organizing sensor networks the sensor nodes themselves are responsible for topology management, data forwarding and network management [1]. Hence, the protocols implementation, to carry-out different tasks in the above two approaches are different.

A SURVEY ON ENERGY EFFICIENT USAGE OF INTRUSION DETECTION SYSTEM IN MOBILE AD HOC NETWORKS

¹N.Venkateswaran, ²Dr. K.Umadevi, ³Dr. A. ViswaBharathy, ⁴Dr. R. Jegadeesan

¹Research Scholar, Anna University, ²Professor, ^{3,4}Associate Professor

¹Department of Computer Science and Engineering

²Department of Electronics and Communication Engineering

^{3,4}Department of Computer Science and Engineering

Abstract: Mobile Adhoc Network (MANET) is a cluster of wireless movable nodes and are self-created and self-organized, in which all the nodes move and communicate with each other in the network through radio energy without any centralized control and base stations. In this network infrastructure, every node is independent. Thus, due to its original nature of mobility, network changes its frequency, so it's a challenging task to provide secure energy efficient routing in MANETs. Intrusion Detection Systems (IDS) are implemented in MANETs to monitor the activities of nodes, to discover any interruption in a susceptible network. A probabilistic model projected that makes utilization of participation involving IDSs among neighborhood nodes to moderate their dynamic time. In this Literature paper, first gives a quick survey of different types of IDS designed to protect attacks in MANET. Then, focus on intrusion detection capabilities for MANETs.

IndexTerms: MANETs, Intrusion detection system, Ad hoc networks, intrusion detection, energy efficiency.

I. INTRODUCTION

MANET is infrastructure less, highly capable and speedy deployable wireless based network technology. MANET is self-configured and shortly used the network, and their routing decisions, data operations and data transmissions will be carried out by the node itself. MANET is adaptive networks that can be generated and ingenerated without the need of any federal administration. These extensive essential features help MANET very much crucial in the regions of real-world applications where the fast and irregular change in the topology occurs.

Structure of MANAT

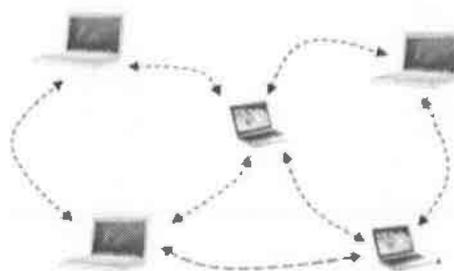


Figure: 1 Structure of MANAT

In the mobile network architecture, a node will play as a router and a host to broadcast the data to the target node, and it may connect and depart the network dynamically. In this network, no centralised control or pre-existing communications exists. MANETs are unexciting to a range of security attacks. So it is massively desirable for MANETs to make use of secure routing techniques and protocols to ensure network privacy, reliability, legitimacy and accessibility. The different types of security solutions are available that works well for wired networks and will not fit into the MANETs. The potential usage of secure routing protocols in the mobile system, the effect of several security attacks abridged.

II. INTRUSION DETECTION SYSTEM (IDS)

An ID is competent to detect the intrusions and alerting the administrator of the system about the signs of possible interventions. It provides information against any lack of confidentiality, integrity and availability of the enterprise's cerebral resources.

Due to rapid growth and trends in global networks, intrusion detection is the process applied to discover intrusions. An ID technique is implemented to sense all types of vicious attacks in the network traffic and an environment like computer usage that will not be detected by a conservative security firewall. The attacks which include data ambitious on applications, network attacks against vulnerable services, some of the host-based attacks are fake credential logins, privilege escalation, the right of entry to sensitive files and malicious program. Security is very much essential for the users to save their systems from external unprivileged resources. In the security aspect, the firewall model is one of the present protection techniques are implemented to protect the network. ID techniques are used in web-related system activities such as medical related web applications, credit card frauds determination and an Insurance agency system. [12].

IDS are a mechanism or software application that monitors the entire network traffic or system for dangerous activities or strategy destruction and generates reports to base stations. Different types of IDS are represented such as:

Comparison of DES, AES, Blowfish and Twofish Symmetric Key Cryptography Algorithms

¹R.venkateshwarlu

¹Associate Professor-Department of Computer Science & Engineering,
Jyothishmathi Institute of Technology & Science, Karimnagar, Telangana State, India 505481.

Abstract-Currently, security is the most effective hand of Internet and network applications. In the current generation, Internet applications and networks are growing very fast, so the importance and value of data exchanged through the Internet or other types of media are increasing. Therefore, the search for the best solution to offer the necessary protection against illegal data attacks along with the provision of these services on time is one of the most interesting topics in communities related to security. Cryptography is one of the main categories of computer security that converts information from its readable form into an illegible form. The two main characteristics that identify and differentiate one encryption algorithm from another are its ability to protect data protected against attacks and its speed and efficiency to make it so important.

This document provides a fair comparison between the four most common symmetric key cryptography algorithms: DES, AES, Blowfish and Twofish. Since the main concern here is the performance of the algorithms in different configurations, the presented comparison takes into account the behavior and performance of the algorithm when different data loads are used. The comparison is made based on these parameters: speed, block size and key size. A simulation program is implemented using C programming and Java programming.

Keywords: Cryptography, DES, AES, Blowfish, Twofish Encryption, Decryption.

1. INTRODUCTION

Cryptography is usually referred to as "the study of secret". Encryption is the process of converting normal text to unreadable form. Decryption is the process of converting encrypted text to normal text in the readable form.

Cryptography is generally known as "the study of secrecy". Encryption is the process of converting normal text to an illegible form. Decryption is the process of converting encrypted text to normal text in readable form.

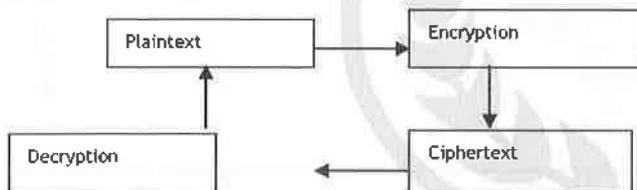


Figure 1: Conventional Encryption and Decryption Model

Steps involved in the conventional encryption model.

- A sender wishes to send a global greeting message to a recipient.
- The original message, also called **plain text**, is converted to random bits known as encrypted text by using a key and an algorithm. The algorithm that is used can produce a different output each time it is used, depending on the value of the key.
- Encrypted text is transmitted through the transmission medium.
- At the end of the recipient, the encrypted text is converted back to the original text using the same algorithm and key used to encrypt the message. Figure 1. Next, the conventional cryptographic process is shown.

As defined in RFC 2828 [11], the cryptographic system is "a set of cryptographic algorithms together with key management processes that support the use of algorithms in some application context". The definition provides the entire mechanism that provides the necessary level of security comprising network protocols and data encryption algorithms.

Evolution Of Web Log Mining Projected On Improved Fuzzy C-Means Clustering Algorithm

P.Pranitha*, M.A.H Farquad# and Dr.G.Narsimha\$

*Reseach Scholar, CSE , JNTUH Hyderabad, Telangana State

#Associate Professor, CSE, SRIIT Hyderabad, Telangana State

\$Associate Professor, CSE, NTUH Hyderabad, Telangana State

Abstract

Web usage mining is the method of mining valuable usage patterns as of the web data. Web personalization uses web usage mining method for the progression of knowledge attainment done by scrutinizing the user directional patterns awareness. Nowadays, the Web is an imperative source of information retrieval, and the users accessing the Web are from different families. The usage information about users is verified in web logs. Studying web log files to extract useful patterns is named Web Usage Mining. Web usage mining approaches consist of clustering, association rule mining, sequential pattern mining etc. The web usage mining approaches can be pragmatic to forecast next page access. As the size of cluster increases due to the rise in web users, it will become predictable need to augment the clusters. This paper proposes a cluster optimization methodology based on fuzzy logic and is used to reduce the redundancy for clustering Fuzzy C-Means (FCM) algorithm is used. Fuzzy cluster hunting algorithm for cluster optimization is used to personalize web page clusters of end users. Clustering is a data mining technique of grouping set of data objects into multiple groups or clusters so that objects inside the cluster have high similarity, but are very disparate to the objects in the other clusters. Fuzzy C-Means is the most commonly used method where an element may have partial membership ratings in more than one fuzzy cluster. This investigation work makes use of MATLAB language to yield a fuzzy clustering algorithm for a URL database into several numbers of clusters. The clusters as well as the membership function has been implemented using MATLAB. The results obtained from the database detect n-clusters to handle the inaccurate and abstruse result. Future research work deliver a relative analysis of K-Means, Fuzzy C-Means and Improved Fuzzy C-Means clustering techniques that provide appropriate and accurate data analysis in the field of web log mining.

Index terms : WebLog Mining, K-Means algorithm, Fuzzy C-Meansalgorithm,ImprovedFuzzyC-Meansalgorithm

1. Introduction

Data mining is the process of analysing data from different angles and summarizing it in useful information. Technically, data mining is the process of creating relationships or patterns between dozens of fields in large relational databases. Mining on the internet is the application of mining data technologies to discover the patterns or trends that the user follows from the web. It is required because only a small fraction of the information on the web is convenient and gives the user what he wants from the web mining is required because the information stored on the web around the world grows fast and gives the user what he wants is very important. There are three main thrust areas of web mining. The styles that users follow through these three technologies are evaluated in the Web Ming, and these styles are analysed to get the desired output from the user. The desired output is then fed into the understandable graphical user interface.

Survey on Depth-Based Routing Variants for Underwater Wireless Sensor Networks

¹B. Umarani, ²A. R. Naseer

¹Department of Computer Science and Engineering, JITS Karimnagar affiliated to JNTUH, India

²School of Computer and Information Engineering, INHA University Korea and Tashkent

Abstract: Recent studies in underwater wireless sensor networks (UWSNs) have attracted the attention of researchers in academia and industry in critical application areas such as catastrophe and earthquake prediction, water high-quality and environment monitoring, leakage and mine detection, army surveillance and underwater navigation. However, the aquatic medium is related to some of the limitations and demanding situations: lengthy multipath put-off, high interference and noise, harsh surroundings, low bandwidth and restricted battery life of the sensor nodes. These challenges demand research techniques and techniques to conquer in an efficient and effective style. The design of efficient and robust routing protocols for UWSNs is one of the promising answers to address those demanding situations. This paper provides a survey on the Variants of Depth-Based routing protocols for UWSNs. These addressed routing protocols fall under the taxonomy of localization-free protocols. These approaches are in addition subdivided in step with the problems they deal with or the major parameters they employ at some point of routing. In addition, every protocol is described in phrases of its routing strategy and the problem it addresses and solves. The advantages and limitations of protocols are highlighted. The description of the routing approach of each protocol makes its routing operation effortlessly understandable. The demerits of a protocol present perception into overcoming its flaws in future investigation. These may result in the foundation of new protocols which can be extra smart, strong and novel with the preferred parameters recognized.

Keywords: Underwater wireless sensor networks (UWSNs), UWSN challenges, Depth-based Routing variants, Energy balancing, Network Lifetime

I INTRODUCTION

Initially, Wireless Sensor Networks (WSN) covered most effective terrestrial programs, but we recognize that the Earth is a water planet as greater than 70 % of the floor is included by means of the water and the large unexplored vastness of the oceans has attracted human's interest. From many a long time, there had been sizable interests in monitoring aquatic environments for scientific, commercial exploration and as well as for navy operations. A rather specific, actual time and continuous tracking structures are extremely crucial for diverse programs, including off-shore oil fields monitoring, pollutants detection, and oceanographic information collection. Hence all these critical applications call for the need of building Underwater Wireless Sensor Networks (UWSN). The traditional techniques for the underwater tracking have several drawbacks. Firstly, there have been no help for the interactive Communications between the specific ends. Secondly, in most of the instances the recorded statistics can be retrieved at the end of the mission, and it may take several months, and any failure during the project can result in the loss of all the gathered records. Further, the idea of an ad hoc and sensor networks for underwater may be very attractive, because it is found to be useful without problems to increase the range of current acoustic modems and provide distributed communications with much less deployment time. A scalable UWSN offers a promising solution for discovering effectively and for monitoring the aqueous environments for specific applications, which operate under the various vital constraints. At one aspect, those environments are not viable for human presence as the unpredictable underwater activities, excessive water pressure and considerable vastness of water areas are main motives for unmanned exploration. At the same time, localized exploration is better than remote sensing because of the more precise consequences, as remote sensing technology may not be able to locate appropriate information about the activities happening inside the unstable underwater surroundings. Radio waves can travel for longer distances but because of salty characteristics of water, it really works at very low frequencies, and these low frequencies require massive antenna in addition to high energy for communications. For example, experiments carried out at University of Southern California, indicates that, simplest 1.2m communication range was possible at the high frequency of 433 MHz [6]. On the other hand, optical waves do not have the trouble of any such high attenuation, but suffer from the scattering, and require high precision of the pointing beam as well.

The WSNs framed with sensors are capable of reading, handling, collecting, storing and transforming information to other sensor nodes in unidirectional or multidirectional domains. There are five types of WSNs used for monitoring the environment on the earth, above and below the earth with the data from the sensor nodes. They are Terrestrial, Underground, Underwater, Multimedia and Mobile WSNs. Large numbers of underwater acoustic sensor nodes are clustered in underwater wireless sensor network (UWSN). UWSNs are positioned in an undersea or marine environment and nearby surroundings inundated wrecks, for oceanographic data gathering and calamity prevention [1], [2]. In UWSN, the sensor nodes are integrated in a network to gather information and pass on to the sink node. Fig. 1 shows such a scenario of Underwater wireless sensor networks and Fig. 1.2 depicts the components of a typical sensor node architecture in UWSN. In general, UWSN differs from normal sensor networks in terms of acoustic signal, cost, memory space, data size, energy and deployment. Mainly the UWSN protocols were used to monitor the areas and collect the information from the various water sources such as streams, canals, pools, ponds etc. But, in the case of ocean and marine areas as they are large and almost borderless in surroundings and several parameters like size of the area, water position, energy, quality are essentially to be investigated on real time. But in these, UWSN protocols sometime fail to receive the information from the sensor node which may be

MINING ASSOCIATION RULES IN INCREMENTAL MINING USING INC_PNAR

¹G.Srilatha, ²Dr. N.Subhash Chamdra, ³A.Vishwanath

¹Assistant Professor, ²Professor, ³Assistant Professor

^{1,2,3}Computer Science and Engineering,

¹Jothishmathi Institute of Technology and Science, Karimnagar,

²CVR College of Engineering, Vastu Nagar, Mangalpalli(V), Ibrahimpatnam (M), RangaReddy (D)

¹Sree Chaitanya College of Engineering, Karimnagar,

Abstract In many applications the progress of association rules has made very practical in the vein of market basket analysis, decision making, and other varied fields. As the records are continuously added in to the transactional databases and also outdated transactions are useless and are removed, new essential applications need incremental mining. Incremental mining deals with the discovery of association rules acquired from mining of earlier stored databases and incremented databases without scanning the earlier mined databases. Based on this, mining positive and negative association rules is an important research topic. In this paper, proposed an algorithm (INC_PNAR) based on a tree based approach(INC_FIFIT) as a data structure to hold frequent and infrequent itemsets, which updates the INC_FIFIT when new transactions are inserted and mine both positive and negative association rules. With a Yule's Coefficient measure, the INC_PNAR algorithm generates all valid positive and negative association rules.

IndexTerms: Data Mining, Frequent Itemsets, Infrequent Itemsets, Positive Association Rules, Negative Association Rules

I. INTRODUCTION

As the time advances, the importance of data mining has grown speedily with the increase of large data in dynamic data bases for various applications. Transactional data bases provide the information related to the behavior of customers and help in making the decisions for improving the quality of business. As the data being processed is huge, it is vital to analyze adequate data appropriately before making decisions. It is essential to develop efficient algorithms to mine association rules from these data. Many applications such as super market data, stock market data, sales data, weather / traffic records, etc., have produced the need for incremental mining, because of the increased use of database-based records where data is added indefinitely. In many applications, recent data is extracted in transaction databases. Many applications like super market data, stock market data, sales data, and weather/traffic records, etc, have produced the need of incremental mining, because of increasing the use of record-based databases where data is being endlessly added. In several applications, recent data is mined in the transactional databases. Incremental mining, not only incorporate new data but also eliminate the previous obsolete data from the mining process. Incremental mining deals with the discovery of association rules acquired from mining of earlier stored databases and incremented databases without scanning the earlier mined databases. The endeavor of incremental mining methods is to re-run the mining algorithm on only updated database. The process of incremental mining is shown in Fig 1.

Usually the updated portion is small compared to the whole dataset and earlier mining rules are not used for generating new rules due to their low efficiency. It is essential to develop algorithms in such way that only updated and previous mined rules to be taken into account for generating new rules. Several traditional Association Rule Mining algorithms such as Apriori, AIS, DIIS, and Partition were developed for discovering association rules but most of them are static in nature. The first incremental mining algorithm was the Fast-Updated algorithm (FUP). Several maintenance algorithms were developed such as, FUP, FUP2, UWEP, etc but they were concentrated on only on the problem of maintaining updating positive association rules. Few researchers resolve the importance of negative associations. So, it becomes a challenging issue for maintaining both positive and negative association rules.

II. BASIC CONCEPTS

Let $I = \{i_1, i_2, \dots, i_n\}$ be a set of n distinct literals called items. Make D a set of transactions, where each transaction T is a set of elements, each transaction is associated with a unique identifier called TID. Let A , called a group of items, be a group of items in I . The number of items in an item group is the length (or size) of an item set. The k -length material groups are referred to as item groups. It is said that transaction T contains A if it is $A \subset T$. The Association rule is implied by model $A \Rightarrow B$, where $A \subset I$, $B \subset I$, and $A \cap B = \emptyset$. The rule $A \Rightarrow B$ contains support (referred to as supp) s in the DB if s of the transactions in D contain $A \Rightarrow B$. In other words, support for the rule is the probability that A and B will consolidate together all submitted cases. For example $\text{supp}(A \Rightarrow B) = \text{supp}(A \cup B) = P(A \cup B)$. The rule $A \Rightarrow B$ has a measure of its strength called confidence (denoted as conf) c if $c\%$ of transactions in DB that contain A also contain B . In other words, the rule trust is the conditional probability in which B is correct in case of case A for example $\text{conf}(A \Rightarrow B) = P(B | A) = \text{supp}(A \cup B) / \text{supp}(A)$. The problem of discovering all pairing rules from a set of transactions is to create rules that have greater support and confidence than the given limits. These rules are called strong rules, and the framework is known as the Trust Support Framework for mining the base assemblies.

IMPACT ON OFFLINE SHOPPING INFLUENCE ONLINE SERVICE

¹N.Venkateswaran, ²R.Jegadeesan, ²Vaida.Deepak, ³Santhoshini Vishwanatham, ⁴Dr.Madugula.Sujatha

^{1,2,4}Associate Professor, ³Student

Department of Computer Science and Engineering
Jyothishmathi Institute Of Technology And Science, Karimnagar, 505001

ABSTRACT: In this new era, time becoming an essential factor for every individual and the main motto of our application is to satisfy the customer and increases the small scale business. The study tries to acknowledge that, however shopping for his or her buying. Specifically, It progresses an abstract model that addresses shopper worth perception for using the net searching versus the regular searching. Observations of online and offline patrons will be evaluated to check the quality of each channel. It's so far to recognize what factors influence online and offline searching alternative progression. The primary goal of the comprehensive survey is to produce a bearing of online searching call method by comparing the offline and online deciding and characteristic the factors that encourage customers to make user mind up whether or not to try to online searching or choose the offline searching. Consumer's search once and wherever they require, wherever the products are quickly and easily find in our surrounding area. Compare to online shopping it will take to 2-7 days for delivery though we can't see it and test it through the product & and product quality is well known in offline shopping, though we are making an application with online services. The proposed methodology will make the users more comfortable and flexible to get the products quickly from the current location, by this improves the buying behavior of the users.

IndexTerms: Online & offline shopping, Online shopping v/s offline shopping, advantages & disadvantages of online and offline shopping, difference between online shopping and offline shopping ,online purchasing ,offline purchasing.

INTRODUCTION:

In 21st-century computer technology, the internet, and modern communication technology. Economic globalization, informatization, and networking are not only influencing economy and culture but also transforming the traditional administration pattern and government operation mode. As such, the study on government informatization is of considerable theoretical significance and practical value for many countries. [2]

Now a day and money are the two primary things which the world can be moving on it and such important things are getting wasted on searching of the needs by searching a place with investing significant time and money unsatisfied manner due to the absence of that particular needs at that specific location. Wasting of that valuable element due to unavailability of the requirements is not an ethical issue and visiting many shops and the unavailability of our particular item may lead to dissatisfaction of the user, and he wants to compromise with the requirements at last. To overcome the time complexity, and provide flexibility for the customer to buy the item quickly. Where the availability of the needs of the goods in the shops will displays along with the count of availability by mentioning the particular brand, and it also traces the roots from the current location and will even mention the time need to travel to that specific location. The data will be automatically updated when something credit money on it. The techniques incorporate beneficial for every individual, and it also makes benefits for the shopkeepers too. In our form, the shopkeeper should be registered into our website and keep on updating the availability brands, and the item's he also mentions the availability of the count in the website so that the user can get clear out information about the location and stock of their wanted needs.

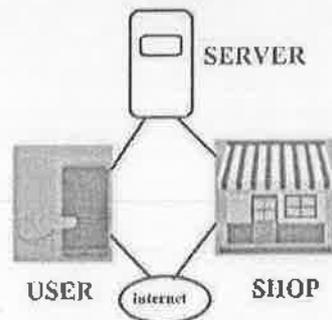


Fig 1:Architecture of The Application

The data will be automatically updated if any item is billed or sold. By this, the shopkeeper can attract many more customer will be automatically. The stock is exhaling of the particular brand they should post the alternative company/brand which is similar to that product, and The decision is in customer's hand whether to take or not In case of emergency of any customer our app already shows the nearest location. In the case of unavailability of any particular brand/company the shopkeeper to update the list of items, our application will send an alert message for those specific customers.

A SURVEY ON RISK ASSESSMENT ACROSS LIFE CYCLE FOR SMALL AND MEDIUM PROJECTS

¹R.Satya Teja, ²Dr. R. Jegadeesan and ³K.Mahesh Raj

¹satyaspeaks2u@gmail.com, ²ramjaganjagan@gmail.com, ³maheshruaj007@gmail.com

^{1,2}Assistant Professor-CSE, ²Associate Professor-CSE

^{1,2,3}Jyothishnathi Institute of Technology and Science, Karimnagar, India

Abstract

The risk is labeled as an undesirable event that is found in every project, regardless of the industry. The majority of the software project did not meet the objectives, that is, scope, time, cost and quality. Software projects faced a wide range of risks and all risks can not be treated with the same priority. The risk can be prioritized by the probability of its occurrence and its impact. Therefore, risk assessment is necessary to highlight and prioritize serious risks. However, very little research focused on the risk assessment faced by small and medium software projects. This research carries out a risk assessment and highlighted the serious risks faced by professionals working in small and medium-sized projects and software when documenting probability and impact. The chances of success of software projects can be increased by performing an appropriate risk assessment. Risks are identified through the exploration and review of existing literature. The identified risks are grouped by phases of the life cycle. This research uses a questionnaire-based approach to record the response of 163 software professionals working in the software industry. SPSS is used for data management and for statistical analysis. The probability and impact of each risk are measured to highlight the potential risks. The results concluded that the level of severity of most of the risks faced by small and medium software projects is significant and high. The success of each project is very important for the progress of organizations that work at small and medium levels. Therefore, this research guides professionals and organizations to consider and prioritize the risk they face when working on small and medium software projects to increase the chances of success of projects.

Keywords: Software Projects, Risk Assessment, Risk Management, Risk Prioritization, Probability Impact Matrix.

Introduction

Risk is defined as a harmful event that may occur during project course and has adverse consequences. The topic of risk started with the beginning of projects and project management. The risk has been under discussion due to its importance and influence on projects success from decades. Risk has been encountered by every project irrespective of industry. It can be viewed from probability of its occurrence and its impact in terms of budget loss, schedule delays and performance issues. The measures of project success has been classified as, nature of the procedure of project management, consumer loyalty, overall industry, productivity, and so forth. By incorporating earlier studies and research discoveries of different researchers, far reaching hypothetical structures proposed for improvement of a project risk management the chances of project success can be increased [1].

The risk may be independent (which occurrence doesn't rely on the occurrence of other risks) or dependent (which occurrence rely on the occurrence of other risks) by nature. The dependent risks [2]. Risk can arise from both inside and outside the organization. The risks that come from inside an organization and cause troubles to a project are labelled as internal risk whereas the external risk that are hard to handle come from outside the organization [3]. To overcome software projects failure software risk management has been considered an effective approach. Risk management links potential responses

A Survey on Internet of Things (IoT) Security

¹ G.Ranjith kumar, ²K.Kumaraswamy

¹ Assistant Professor, Department of Computer Science and Engineering
Jyothismathi Institute of Technology and Science, Nustulapoor, Karimnagar.

² Assistant Professor, Department of Computer Science and Engineering,
Malla Reddy Engineering College for Women, Maisammaguda, Hyderabad

Abstract: The Internet covers things from different areas of study, including mobile computing (MC), distributed computing (PC), wireless sensor networks (WSN), and cyber physics (CPS). Internet speaks things to a sophisticated and variable field with many definitions [3]. This Internet paper describes things as a follow-up. Internet Objects (IoT): A wired or remote system of commonly known connected devices that can process information related to each other with or without human input

A number of manufacturers have created and sold Internet tools that exclude sufficient security features. This has resulted in real, financial and other harm to open communities and to the general population. The ongoing state of this command involves DVRs and IP cameras that are currently being reviewed by XiongMai Technologies [1].

Because Internet objects proliferate, unless some steps are taken to verify these tools, subsequent damage may be increasingly severe. Corporate and individual customers in Internet tools may not have the specialized ability to evaluate the cost / advantage of acquiring appropriately verified and cost-effective tools. Furthermore, if the threats posed by the instruments affect third parties other than the producer or buyer of the instruments, at this stage there may be no money motive for the supplier or buyer to emphasize the security of the gadget.

This paper is proposed to a secular group of peoples. The suggestions presented in this paper are generally proposed for development by manufacturers of Internet objects, however they are designed to be decomposable by unprofessional but successful legislators and producers of institutional and administrative strategies and members of standard setting bodies.

Index Terms – Wireless Sensor Network, hardware MC, firmware, Protocols, Sensor network services, authentication, bandwidth.

1. INTRODUCTION

The purpose of this paper is to show a lot of all the rules of Internet Safety Detected Objects (IoT) and best practices that others can use as a reason for future principles, assertions, laws, methodologies and evaluation of additional elements. Most of these rules apply, if not all, to any Internet-related tool; however, this paper focuses on safety efforts, especially for Internet objects, or for Internet objects. This paper accepts the point-to-point processing model for the Internet, where applications are focused on, for example, security through the system's peripheral hubs, client and server devices. It focuses on security components, including installation and updating, which must be considered at the assembling assembly stage rather than after manufacturing or sending gadgets.

This paper develops the findings of 2016 by the IEEE Internet Initiative and the IEEE Expert Forum on Technology and Policy (ETAP) on Internet Governance, Internet Security and Privacy. ETAP has signed several occasions in 2015 and 2016 in various regions around the world, including Israel, China, India and the United States. These events have combined technology technologists,

A SURVEY ON AN ONTOLOGY DEVELOPMENT ON DATA INTEGRATION

¹N.Mahesh Raj, ²Dr. R. Jegadeesan and ³Satya Teja

^{1,2}Assistant Professor-CSE, ²Associate Professor-CSE

^{1,2,3}Jyothishmathi Institute of Technology and Science, Karimnagar, India

Abstract

Implementation of data integration in the current days still has many issues to be solved. Heterogeneity of data with non-standardization data, data conflicts between various data sources, data with different representation and as well as semantic aspects problems are among challenging research areas. Semantic data integration using ontology approach is considered as an appropriate solution to deal with semantic aspects problem in data integration. However, most methodologies for ontology development are developed to cover specific purpose and thus not suitable for common data integration implementation. This research offers an improved methods for ontology development on data integration to deal with semantic aspects problem. There are three main parts in this research, the first part is to review, compare and critically analyse the existing methodologies for ontology development. The second part is to create custom ontology development phases for specific purpose in the data integration implementation. The third part is to implement and evaluate OntoDI. This research is also a continuation and improvement of the previous work about ontology development methods on agent system. Furthermore, the ultimate goal of this research is customization, improvement and simplification of the existing ontology development phases for specific purpose on the data integration implementation.

Keywords: Data integration, Methods, Ontology development, Semantic issues, Semantic approach.

1. Introduction

The implementation of data integration still leaves many problems to be solved. Sharing and integrating data from loosely coupled, heterogeneity of data representation and mapping data on different data source are among serious problems on data integration [1-6]. Moreover, a big data that most likely includes the heterogeneity of data produces data conflicts issues especially on semantic aspects between different data representation and sources [7, 8]. This phenomenon to be more common and to be the main challenges in the data integration implementation in the last few years [7, 9-15].

Semantic aspects problem is related to the meaning of every word between terms in a special context or system [7, 16]. There are two possibilities of data problem on semantic aspects [17]. The first problem is about data that have different names with the same meaning. For example, between two data sources with different applications in education domain, they store data about students. In the one data source, student's data saved by pupil name and in the other data source student's data stored by learner name. This condition produces semantic data conflict between learner and pupil, because in these two data sources are store the same data about student information. The second possible problem on semantic aspect is about data that has the same name with different meaning. For example, inside education domain between two data sources with different applications, they store about students (undergraduate and postgraduate students) data. In the one data source, undergraduate data saved by student name and in the other data source postgraduate data stored by student name also. Semantic technology is the solution for this problem using ontology approach to make semantics relationship between these two semantic aspects.

The methodologies for ontology development have been growing up in recent years. Every ontology development methods that has been proposed is based on specific goal and domain area to implement the ontology result [18-20]. In this research also discussed about review and comparison activity to analyse the existing ontology development methodologies. It is expected to obtain a brief summary of existing ontology development methodologies.

The aim of this research is to produce an improved methods phases for ontology development specific on data integration domain area (OntoDI). The development of OntoDI is based on review, comparison and analysis activity in the section two and an improvement of ontology development methods from our previous work. The ultimate goal of the development OntoDI is the customization, improvement and simplification of the existing ontology development phases for specific purpose on the data integration implementation.

2. Existing methodologies for ontology development

Several methodologies for ontology development have been developed since late eighties [21-25]. The first objective in this research is to review, compare and analyse existing methodologies for ontology development based on five criteria's. The first criteria is the name of methods and the year when the methodologies are developed. The second criteria is the name of the developer that creates methods. The third criteria is the purpose of the methods development. The fourth criteria is about methods categories. The final criteria is about methods steps.

There are three categories of development methods, the first category is the methodologies that consider about collaborative and distributed construction (CoDi), the second category is the methodologies that do not consider about collaboration and distributed construction (NoCoDi) and the third category is the methodologies that can be reengineered (Reeng) [19]. Based on Badr et al, there are four methodologies in the first category, seven methodologies in the second category and no methods has been developed in the third category [19]. However, this research is to update the number of methodologies with the latest methodologies, improve some methodologies categorization, and compare with more detail and with different perspective of the existing methodologies.

A Review of Routing Protocols for Mobile Specially appointed Networks (MANET)

¹Gourishetty Sindhudha, ²Dr. R. Jegadeesan, and ³Palakurty Shashank

¹Assistant Professor-Department of Computer Science and Engineering

²Associate Professor-Department of Computer Science and Engineering

³Final year Student-Department of Computer Science and Engineering

^{1,2,3}Jyothishmathi Institute of Technology and Science, Karimnagar, India.505 481

ABSTRACT

The expansion in accessibility and prominence of versatile remote devices has led analysts to develop a wide variety of ad-hoc mobile network (MANET) conventions to misuse the interesting mail openings introduced by these devices. The devices can directly impart the remote range in a distributed manner and the messages of the course through intermediate hubs. Anyway, the idea of remote shared correspondence and cell phones carries many management and security challenges, which must be addressed before sending a MANET. In this work, investigate the scope of the MANET management conventions that can be accessed and talk about the functionalities of some that are executed from the first conventions, for example, DSDV to further development, for example, MAODV. leader. A writing scope was identified and inspected that was identified with the MANET address field, and the writing was examined in order to verify MANET based on AODV, since this could be the most famous MANET convention. The writing survey recognized several patterns within the research work, for example, the selective use of the demonstration of the versatility of irregular waypoints, preventing key measurements from being reproduced in the results and not seeing the execution of the convention compared to the accessible options.

Index Terms—AODV, MANET, routing protocols.

1. INTRODUCTION

MANETs that contain more hubs require more prominent handling force, memory, and transfer speed to maintain accurate address data; This generates an overload of traffic in the system as the concentrators impart address data, this therefore uses more control of the battery. Remote advances use a common means of correspondence; this causes an impedance that the disaggregation processes organize when different hubs try to transmit all the time. Systems, for example, the distributed coordination function (DCF) are used to restrict the effect of the channel conflict on system execution, DCF employees detect various accesses with impact evasion (CSMA / CA) and the change of channel to decrease obstruction [4] anyway larger MANET highlight more obstruction. The portability of the concentrators is also an important consideration within the MANET due to the limitation of remote transmission; this can influence the topology of the system so that it changes capriciously as the hubs enter and leave the system [5]. The portability of the concentrator can cause broken address connections, forcing the concentrators to recalculate their address data; this expends the handling time, the memory, the control of gadgets and creates an excess of traffic and additional traffic in the system [6]. The safety of MANETs is another real concern; Due to the portability and the remote nature of the arrangements, pernicious centers can enter the system whenever the security of the centers and the information transmitted is considered [7]. Due to these problems, improvised systems are not suitable for the wider use of cell phones, where access to the web is the key prerequisite; in these circumstances, remote devices typically interact with wired frames through passages (AP) to decrease instability in the remote area [8]. Anyway, the Ad-Hoc arrangements show an incredible potential in circumstances in which the web comes to certify that it is not a key need or the framework is not accessible; including fiasco or military situations or in low power remote sensing systems or vehicles that only need to talk to each other [9].

This work is organized as persecutors; Section II discusses the prerequisites of the MANET steering convention center, Section III discusses the MANET steering standards, Section IV investigates the more punctual MANET steering conventions; DSR and DSDV, as well as the effect of portability models in reproductions. Area V focuses on the MANET AODV steering convention, Section VI presents improvements to AODV through multicasting, segment VII examines the safety frameworks intended for AODV and the Section

2. LITERATURE REVIEW

We recognized some key writing fragments in the field of MANET management conventions that present the existing conventions as well as the current reasoning within the field and the header specialists move on later. Reference [3] recommends that a powerful MANET management convention be equipped to manage dynamic and erratic topology changes related to versatile hubs, while also controlling the restricted capacity of remote data transfer and control of data. devices that can cause decreases in the transmission range or performance. . This is developed by [1] who suggests that despite these needs of the center; The MANET management conventions must also be decentralized, self-recovering and self-classified and ready to abuse multiple rebounds and load adjustments, these prerequisites guarantee the ability of the MANET management conventions to work self-reliably.

MAJOR SECURITY CHALLENGES IN MOBILE COMPUTING

¹A.Sony, ²N.Venkateswaran, ³R.Jegadeesan, ⁴T.Rakesh, ⁵CH.Divya Teja
^{1,4}Students, ^{2,3}Associate Professor, Department of Computer Science and Engineering,
 Jyothishmathi Institute of Technology and Science, Karimnagar, Telangana-505001

Abstract: Mobile Computing is a specific form of human-computer interaction. In the present environment, the size of computing devices or machines are decreased with the power of computing, which is also used to develop computing devices like Laptops, Smartphones, Personal Digital Assistance which are useful and portable to carry from one place to other place and can access the information. Recently a lot of research is carried out, to improve the performance issues like handoffs security. The point that needs to be considered which comes into picture when the communication channel is set up. In this, we can investigate some problems concerned with the security of mobile computing systems and focus on the protection of interactions which built upon the underlying wireless communications medium. Security issues should be identified to protect the physical devices and user's information. The objective and focus of the article is to highlight the security issues and to bring awareness to the users. Few conclusions and solutions presented in the future direction.

Keywords: Mobile Security, Mobile Computing, Wireless Communication

I. INTRODUCTION

Mobile Communication Security plays a significant role in mobile computing. Security is a significant issue for any device that computes when we access the internet and contains sensitive data. Security is compulsory in mobile computing devices such as mobile phones, computers, personal digital assistant (PDA's) due to mobility, wireless communication and portability. Mobile computing allows users to communicate with others with more flexibility and providing the data anywhere, anytime, with cellular phones [1]. People enjoy various services brought by mobile computing. Mobile computing is becoming a global trend in today's world. Security mobile computing will pay by increasing attention. The Security issues to be deal with 3 properties: communication, mobility, and portability.

Security is essential for every network, but mobile computing presents more security issues than traditional systems. Secure mobile computing is critical in wireless network application development. The development of wireless technology has been increasing day-by-day which attracts user, and that has become more popular [2]. The emergence of mobile computing has the latest version even though the technologies are updated. The security challenge is facing hackers who are ready to hack the user's information, and as the technology upgraded, users are now able to control security threats happening by using various security protocols and methods on their device [4].

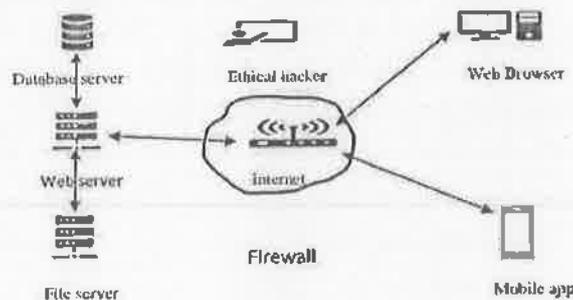


Fig 1: reflect issues in mobile computing

II. Major Security issues and Challenges:

Mobile Computing concept has its fair share of security concerns as any other technology due to this nomadic nature; it does not easy to observe the proper way of usage. People and users might have different intentions on how to utilize this privilege [4]

Inaccurate and illegal practices such as hacking industrial tailing, copying, online fraud, and malicious deletion are some, but some of the problems experienced by mobile computing outsiders gain access to steal vital data from companies, which is a significant hindrance in rolling out mobile computing services [2].

The devices of mobile computing must be protected from security issues to provide security. Another major problem in mobile computing is credential verification. As other users share username and password, it poses a threat to security. The problem is to identify these thefts is very difficult and to eradicate issues with unauthorized access to content and information by hackers is also a different problem. All the companies don't want to lay open their secrets to hackers, and other intruders, who will sell the valuable and confidential information to their competition.

We present more security issues due to the characteristics of wireless transmission and the demand for mobility and portability.

DATA MINING TECHNIQUES AND THEIR ROLES IN INCREASING THE SPEED OF SEARCH IN WEB DATA

¹Ms. Dhanashree Kuthe, ²Mr.P.Srinivas, ³N.Venkateswaran

^{1,2,3}Associate Professor

^{1,2}Trinity College of Engineering and Technology, Karimnagar, Telangana, India.

³Jyothishmathi Institute of Technology And Science, Karimnagar, Telangana, India.

Abstract : The web is the source of all information in the different form. To get the appropriate contents by searching the data on the web is a challenging task. Data mining techniques can help to increase the speed of the search from billions of web pages over the internet. Search engines help to do the proper search for the user. Search engine optimization using web mining is an important aspect to increase the search speed. To make the information more accuracy in the web, different data mining techniques proposed. In this paper, various methods are compared, and the best data mining techniques for search optimization recommended. Results show that the performance of search en improved with the accuracy of finding the information in less time.

Index Term: Data Mining, web search, web data, data mining algorithm, Web Mining

1. INTRODUCTION

The web search is a computer system that provides information retrieval service with the demand of Internet users to quickly query information after the internet is produced [2-4]. It is like an information processing system, with a specific strategy, finding and understanding the data, extraction, organization and processing, and retrieval services for users, for navigation information. Fast information retrieval from the internet or billions of web pages is related to the mining of significant data to get useful results as per the user's query. Now, this web mining is the field of Artificial Intelligence where the use of Machine Learning, Natural Language Processing, Database Query, Graph theory, Optimization algorithms s used. One can use the combination of technologies mentioned above for improving the search results. Now a day's search through image is also available. So the fields of Computer Vision is also applicable in finding the information related to that particular image.

In this paper, were mainly focused on textual query web data. The rapid development of the internet assures thousands of web pages added every day on the World Wide Web (WWW). So the task of finding the proper and desired search results is challenging. Most of the search engines like Google search includes the page rank algorithm where the number and quality of links to a page have been counted to determine a rough estimate of how important the website is. The underlying assumption is that more essential sites are likely to receive more links from other sites. With the increase in the use of Data Mining Machine Learning algorithms for efficient information retrieval, most of the search engines like Google combined their page rank algorithm with the ML algorithms to increase the search speed. Search engines are used ML pattern recognition to identify duplicate and unrelated content and avoid low-quality content. ML helps to identify new ranking signals to improve the quality of search results. The search engine will learn about the specific user's preferences and would base its information on previous queries to current the most exciting information possible. By combining the page rank algorithms with data mining techniques will increase the speed of search.

Search Engine Optimization based on page rank rules, website domain name, keywords in search query and structure and content of the website. Non-commercial domain name have high rank unlike commercial site with com extension. The selection and extraction of keywords from the search query is the most critical task for fast search results. The structure of the place like the hierarchical relationship between the pages of the site and the DOM (Document Object Model) is essential to retrieve the proper webpage.

1.1 DATA MINING

It is the technique for valuable, valid and useful information retrieval from the pool of astronomical data. Data can represent structured like data in tabular form in most cases or unstructured like web data. There are five steps for information retrieval from the data, Data selection, pre-processing, (feature extraction) transformation, data mining algorithm and interpretation and evaluation. The problem is to find a useful analysis from the web data which has e trained from historical data of the user's search patterns. There are many algorithms like regression, classification, and clustering which re supervised and unsupervised respectively. We are comparing different algorithms for web data mining.

In this paper, Section 2 provides the study of existing approaches and their features; Section 3 contains the proposed data mining approach with Results and further improvements in Section 4 and five respectively.

APPLICATIONS AND ASSOCIATED ATTACKS IN WIRELESS SENSOR NETWORK

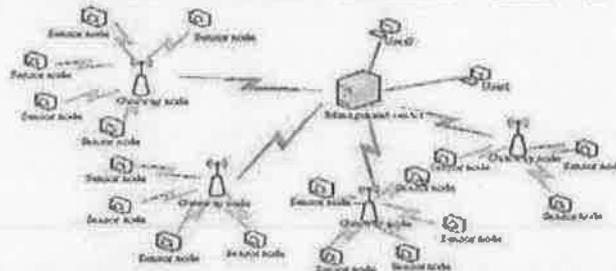
¹ V. Sandeep, ²N.Venkateswaran, ³ G. Pranay Kumar, ⁴G. Prashanth, ⁵N. Pujith
^{1,3,4,5} Students, ²Associate Professor, Department of Computer Science and Engineering,
Jyothishmathi Institute of Technology and Science, Karimnagar, Telangana-505001.

Abstract: A wireless sensor network is a Wi-Fi community and which is consisting of circulated sufficiently using the sensor to reveal the conditions (environmental, physical). There are several applications of the wireless sensor network and these are mainly used for growth, sharing and security and sending the statics. These type of community consisting of the multiple sensors Or multiple detection sensors and they are called as" sensor nodes .each sensor node is small in size and light in weight and they are portable devices. Wireless communication technologies to undergo and rapid advancement. In the past years, research has been done over the WSN. Mainly found in military and civilian applications over the World Wide. These wireless sensor networks is an attractive technology with great promise for the future. On the basis, the challenges are also remained to be addressed and the problems belong to coverage, deployment, QOS (Quality of service), scalability. This paper publishes a piece of small information related to the applications and associated attacks found on WSN.

Indexed terms: Sensor, Attack, Network, wireless, applications, nodes, WSN

1. INTRODUCTION

A WSN(wireless sensor network) is a network consisting of spatially autonomous devices that can use a sensor for monitoring both physical and environmental conditions. These devices (portable) they are combined with network connecting devices like routers, gateways, bridges, switches, hubs, etc.. and they can confirm or create WSN system and these devices(nodes) communicate wirelessly with the gateways and that provide connection to the wired one then you can collect it. And these process can analyze the measurement of data regarding the part of distance and reliability in a wireless sensor network to gain additional information between these devices and gateways. We can also access the wireless network through the internet as shown in below fig(1) and that is to be considered as a physical network[1] & [2]. This particular technology mainly used for purposes such as home and smart spaces, transportation, military; and civilian, medical and environmental, etc.



In fact WSN they are more vulnerable to various attacks than those of guided transmission link. The nature of wireless sensor network communication is reliable and simple. Major challenges are also addressed. Apart from that security is the main issue over the wireless sensor network. This paper comes across various attacks and applications of WSN.

II.APPLICATIONS

In the WSN infrastructures, the software that depends on several constrains. WSN research has to be targeted to increase the solutions and also maintain the range of diverse sensor programs through integrating the software information [3]. Some of the applications associated with the wireless environment which follows

- Environment monitoring system
- Health-Care Monitoring System
- Pollution Monitoring System
- Fire Detection Monitoring Systems
- Routing Monitoring Protocol systems

CLASSIFICATION OF ATTACKS IN CRYPTOGRAPHY AND NETWORK SECURITY

¹Kondabathini, Keerthi, ²N.Venkateswaran, ³MD Asma, ⁴Daravena, Akhila
^{1,3,4}Students, ²Associate Professor, Department of Computer Science and Engineering,
 Jyothishmathi Institute of Technology and Science, Karimnagar, Telangana-505001.

Abstract: Nowadays internet security has become a problematic part of everywhere, so network security plays a significant role. Criminals are easily accessing the individual's data because of everything in the world becomes digitalized way through the internet. The network administrator has to maintain a track of advance updates regarding software and hardware to avoid the attacks. This paper describes Network security aims at internal protection by monitoring the passwords, internet access, fire walls, backups, encryption and more. The information security focuses on safeguard of all the data while cybersecurity focuses only to secure the digital data; it is the subset of information security. Mobile ad-hoc network (MANET) is a kind of ad-hoc network that can administrate/manage by itself, and it can connect to different systems using wireless connections.

Keywords: Network security, information security, mobile ad-hoc network (MANET)

I.INTRODUCTION

The communication between two devices is done by connecting those devices. The connection may be wired(ex: cabling) or wireless(ex: wireless networking cards). The connected devices can access resources like internet, file services, printers, etc. Nowadays computer technology is developing rapidly, as computer technology is developing then the development of internet technology also increasing more.

This age of universal electronic connectivity, where the activities like

- attacks
- hacking
- viruses are prevalent.

So that it is very critical to protect computer& network security, the implementation of the security mechanism is essential to secure or protect the data from unauthorized users. In this paper, we have described some attacks that occurred in MANET, information security and network security.

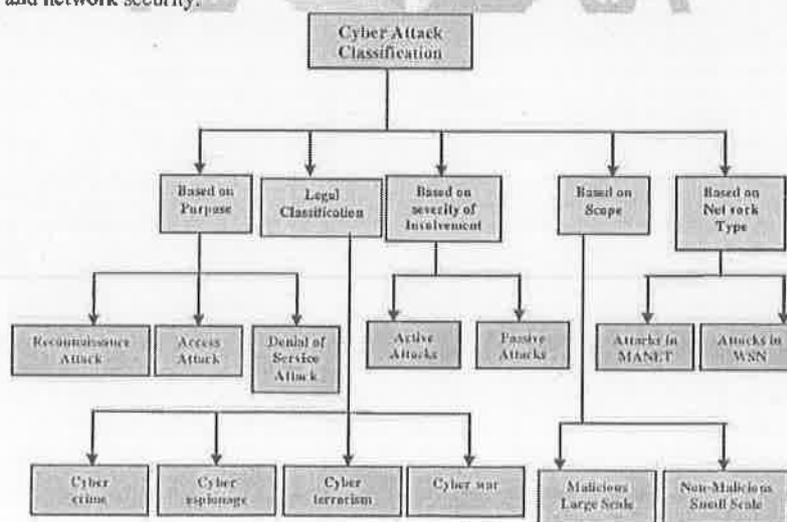


Figure 1: Attack classification diagram

CPW FEED MICROSTRIP PATCH ANTENNA FOR BROADBAND WIRELESS SYSTEM

Sahithya Kandi^{#1}, Samiran Chatterjee^{#2}, S. Sudhakar^{#3}, T. Aruna^{#4}, Tejaswini Palle^{#5},
Suma Reddy Lingala^{#6}, M.Ramakrishna^{#7}

^{#1,4,5,6,7} Student, ECE Department, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{#2} Associate Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{#3} Assistant Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

Abstract— Design and analysis of CPW feed microstrip patch antenna for broadband wireless system is presented in this paper. Antennas are very important components in modern communication. By definition, the antenna is used to convert the radio frequency signal transmitted on the conductor to an electromagnetic wave in free space and the broadband circularly polarized MSA, play a vital role in wireless communication due to its low profile, small size and light weight. Conventional designs of MSA for circular polarization are usually achieved by truncating patch corners, cutting rectangular ring slots in the rectangular patch. We design the circular microstrip antenna by using the MoM based software IE3D. We present feeding approaches of coplanar wave guide fed CPW, with and without DGS. The antenna matched impedance is 50ohms for FR4, a high dielectric constant substrate to obtain broad impedance bandwidth along with stability of the radiation patterns.

Keywords— Polarized, CPW, Impedance, Band-Width.

I. INTRODUCTION

The microstrip component consists primarily of the above-ground metal support area, which is called a microstrip patch. The supporting element is called the substrate material that is placed between the patch and the ground level. A microstrip antenna can be manufactured using low-cost lithographic technology or homogeneous integrated circuit technology. Using homogeneous integrated circuit technology, we can manufacture phase switches, amplifiers and other necessary devices, all on the same substrate through an automatic process [1-8]. In most cases, antenna performance characteristics depend on substrate material and physical parameters. This module will give the basic picture of microstrip antenna configurations, analysis methods and some feeding techniques. In the microstrip antenna, the top surface of the insulating substrate supports the printed conductive strip that surrounds it properly while the bottom surface of the substrate is supported by a connected ground plane. This antenna is sometimes called the printed antenna because the manufacturing procedure is similar to the printed circuit board procedure [9-14]. Many types of microstrip antennas have been developed which are differences in the infrastructure. Microstrip antennas can be designed as thin, flat-level antennas which are very useful components for communication applications. Many advantages and applications of microstrip patch antennas can be mentioned on conventional antennas. There are many unwanted features that we have encountered with conventional antennas, they are huge problems, incompatibility and difficult to carry out their operations and so on. Advantages include flat surface, potential integration with circuit elements, small surface, and generation with printed circuit technology, and can be designed for dual frequency and multi-band. Disadvantages include narrowband bandwidth, low power to deal with RF power, greater OMA loss, low efficiency due to surface waves, and so forth. Over the past two decades, researchers have been struggling to overcome these problems and have succeeded several times in their new designs and new results. There are basically four basic ways of feeding on these antennas Method of coupling probe method Feed line Microstrip slot method Coupling Microstrip Feeding method Proximity coupling.

IMAGE INDEXING USING INTEGRATION OF GABOR FILTER AND HSV ALGORITHM

A.Nikhitha¹, Karthick², M.Ramesh³, A.Nithish⁴, A.Vennela⁵, R.Arunraj⁶, P.Smitha Mayuri⁷

^{1,4,5,6,7}Student, ECE Department, Jyothishmathi Institute of Technology and Science, Karimnagar, Telangana.

²Associate Professor, ³Assistant Professor, Department of Electronics and Communication Engineering, Jyothishmathi Institute of Technology and Science, Karimnagar, Telangana.

Abstract

Content based image retrieval (CBIR), is the most important areas of digital image processing and has become a new and fast way to retrieve images. As the image database grows faster, a better mechanism is needed to retrieve images and get better results. CBIR allows the user to provide a query image to retrieve images stored in the database according to their similarity to the query image. In this paper, content-based image retrieval is used to retrieve a query image from a large image database using two attributes such as color and texture. The color features are extracted through the Hue Saturation Value (HSV) color space and we use Gabor filters to extract texture features from random, separate regions of the image after the segmentation to increase system efficiency. This Reduces recovery time and increases image resolution.

Keywords: Content based image retrieval (CBIR), Hue Saturation Value (HSV), Gabor filters

I. INTRODUCTION

Nowadays, in communication and information image retrieval is a major topic. Image collection is increasing speedily as enhance in image capturing devices like smart phones, digital cameras, and also with increased use of multimedia data. To search and retrieve image from such large image data collection effective tools are needed for different. In early era, text based image retrieval used. All text based image retrieval systems require the text description with images in large scale data bases and manually this task is not effective. Because of this, text based image retrieval systems were not applicable for task dependent queries. To overcome these problems content-based image retrieval (CBIR) was introduced. Content based image retrieval is a powerful tool used to retrieve the image based on visual contents such as color, texture and shape from large database. To deal with image retrieving and indexing brief knowledge of image classification is required. Some of the main applications of CBIR system are biomedical imaging, Face Recognition, Geographical changes, Identification of Fingerprint, Crime Prevention, Digital Libraries, Graphic and Fashion Design, Cultural Heritage, skin detection etc.

I.1 Content Based Image Retrieval

Image-based image retrieval, a feature-extraction technique for searching images from large image databases according to user interests, has been inactive and fast in search since the 1980s. During the past years, remarkable progress has been made in research and system development. Hence, there are remaining challenging research problems still attract researchers from multiple disciplines. Previous techniques were based on the textual annotation of image but not on the visual content of images. From text descriptions, images can be organized by topical or semantic hierarchies from lookup table and to facilitate easy navigation and browsing based on standard Boolean queries.

Survey: Localization of wireless sensor networks: Issues and Challenges

Venkata Reddy Adama¹ G.M. Asutkar²

¹Research Scholar, ²Professor

Department of Electronics Engineering,

Priyadarshini Institute of Engineering & Technology, Nagpur, Maharashtra, India.

¹Venkat7641@gmail.com, ²g.m.asutkar@gmail.com

Abstract:-The considerable drive of a sensor network is to accumulate and send data to the destination. It is also of importance to understand the location of collected data. This type of technique is often used in localization technique in "wireless sensor networks." Localization is a significant feature in the field of WSNs that has created considerable interest over recent years. Localization is a method to determine the location of sensor nodes, and so far, many works have been done. It is highly desirable to design low-cost, scalable, and efficient localization mechanisms for WSNs. Localization is of paramount importance in several WSN operations. This survey paper presents a comprehensive survey of challenges and problems in the localization of sensor nodes in WSNs.

Keywords: wireless sensor network, localization, Range-free Localization Techniques, Localization Techniques Classification.

1. Introduction

A "wireless sensor network" consists of several sensor nodes, which are typically used in a two-dimensional plane to detect and transmit physical

parameters. The detected physical parameters are sent to one or more wells. Each sensor comprises approximately the following units: transmitter, receiver, detection, and calculation. In the WSN, the sensor nodes are implemented in a real environment and determine the physical behavior. WSNs present many research challenges. Sensors are small devices, low cost, and low processing capacity. WSN applications have attracted a great deal of interest from researchers in recent years [1].

Wireless sensors have many applications for monitoring and control. The different WSN applications are: monitoring environmental aspects and physical phenomena such as temperature, sound and light, habitat monitoring, traffic control monitoring, patient care monitoring and underwater acoustic monitoring. WSN poses many search problems, such as media access schemes [2], implementation [3], time synchronization [4], location, middleware, wireless sensors, and stakeholder networks [5], transport layer, network layer, quality of service and network security. [6]

The location of the nodes is significant to find and determine the location of the sensor node using a specialized algorithm. Localization is the process of finding the position of the nodes [7] because the data and information are useless if the nodes have no idea of their geographical locations. GPS (Global Positioning System) is the simplest method for locating nodes, but it becomes costly if there are a large number of nodes in a given network. Many "algorithms" have been proposed to solve

DEFECTED GROUND STRUCTURE MICROSTRIP ANTENNA BY USING FINITE GROUND PLANE

Gottam Jyothika^{#1}, Samiran Chatterjee^{#2}, Dasari Mahesh Kumar^{#3},
G. Raajitha^{#4}, B. Amani^{#5}, K. Laxmi Prasanna^{#6}, V. Arun Kumar^{#7}

^{#1,4,5,6,7}Student, ECE Department, ECE Department, Jyothishmathi Institute of Technology & Science
(Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{#2,3}Associate Professor, ECE Department, Jyothishmathi Institute of Technology & Science
(Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

Abstract: It is proposed that a DGS be connected to a dual-layer, single-layer (DGS) ground-floor structure for communication with a limited ground aircraft. Ring frequency achieved by cutting different slots on patch. Finite ground plane state that there is also different slots and slits are present in the ground plane. We design the micro strip antenna by cutting different slots and slits in the top and bottom layer and try to achieve MSA with increased frequency ratio and low VSWR (Voltage Standing Wave Ratio). The proposed MSA properties are designed using an electromagnetic analyzer based on MoM, IE3D. A comprehensive analysis of loss of return, radiation scheme, absolute gain (dBi) of the proposed array antenna is analyzed in this project. There are two types of ground plane named as: a) Finite Ground Plane and b) Infinite Ground Plane. We achieve large bandwidth in finite ground plane over infinite ground plane and also achieve very closer to minimum value of VSWR. There are so many antennas which are used to design for array structure.

Keywords: Compact, Finite ground plane, Increased frequency ratio, DGS, S11, VSWR

I. INTRODUCTION

To talk about a new era of communication, the microstrip design of the small antenna evokes much interest among young engineers and especially microwave engineers [1]. For microwave transitions, we need a small, lightweight antenna. On this basis, the Microstrip Antenna is the most suitable device. For microwave communication as well as for wireless communication, more than one operating frequency is required per day for many reasons. Operating frequencies are required mainly because most microwave and wireless engineers use different communication bands and engineers use different frequency bands. Therefore, engineers recently designed antennas with multiple properties. Another standard required for antenna design is to reduce the size. Reducing size is the new method. In this way, the size of the antenna is the same as for the conventional antenna. To reduce size, the most useful technique is to cut different structures in the correct position on a traditional microstrip antenna [2-5]. Reducing the size of the antenna means a very low resonance frequency for the cleaved antenna compared to the traditional antenna [6-8]. Unlike slotted antennas, there are other antennas such as DRA (aerial resonance buffer), fractional antenna, etc. to reduce antenna size [15-20]. Hard to design fractal antennas and DRA need to high substrate substrates are readily available. Today, microstrip micro size of the microstrip is very small and can be reduced to increase demand for applications in various communications, especially microwave and mobile communications [9-10]. The microstrip antennas had some traditional limitations, ie individual operating frequency, low bandwidth resistance, low gain, large volume problems, polarization.

A number of techniques have been reported to enhance the parameters of traditional microstrip antennas, ie using stacking, different feeding techniques, frequency selective surfaces (FSS), electromagnetic field gap (EBG), photonic band gap (PBG), meta-material, and so forth. The DGS component has gained popularity among all reported techniques to enhance parameters due to its simple structural design. The drilled openings or defects are referred to at the ground level of the microstrip circuits as the dissociative ground structure.

Individual or multiple defects on the Earth's surface can be considered DGS. Initially DGS was reported for filters under the microstrip line. The DGS was used down the microstrip line to achieve the off-range properties and suppression of the harmonics in high-mode and reciprocal coupling. Following the successful implementation of DGS in the field of filters, DGS is currently in wide demand for various applications. This paper presents the development and development of DGS. Basic concepts, work principles, and equivalent DGS models are discussed in the field of antennas.

Design and Analysis of Size Deduced Square Printed Patch Antenna with Transmission Line Feed

A.Harika^{#1}, Samiran Chatterjee^{#2}, B.Soumya^{#3}, A.Madhuri^{#4}, J.Saikiran^{#5}, Ramesh Jitty^{#6}

^{#1,3,4,5}Student, ECE Department, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{#2}Associate Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{#6}Assistant Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

Abstract- One layer, patch patch antenna patch printed box feed box is proposed to connect. The resonance frequency was achieved using simple triple correction. We have achieved the proposed antenna using UWB (Ultra Wide Band) and Low Voltage Low Voltage (VSWR). The characteristics of the proposed antenna are designed using an MOM-based electromagnetic analyzer, IE3D. The proposed antenna for introducing the correction in the feed box provides good resonance frequency; return loss, VSWR, radiation pattern and antenna gain. The design of a small tape antenna to improve bandwidth and gain routing is a challenge to the connection. This paper suggests designing a Micro-Square Square-Patch antenna with enhanced bandwidth and gain routing. The simulation results give a significant improvement in terms of gain guideline and bandwidth.

Index Terms- layer, Transmission Line, Patch, Gain, Wide Band

I. INTRODUCTION

Microstrip patch antennas have attracted the attention of researchers over the past few decades. However, the latent antennas in narrow bandwidth and low gain is one of the major defects [1-2]. This is one of the problems that researchers around the world are trying to overcome. Over the years, authors have devoted their investigations to the creation of new designs or forms of the original antenna, which to a certain extent produce wider bandwidths. The patch antenna was quickly used in various areas such as space technology, aircraft, missiles, mobile communications, GPS and broadcasting. Antennas with lightweight patch, small size, low cost, simple manufacturing, easy integration with circuits. More important is that they can be made in different shapes such as rectangular, triangular, circular, square etc. [3]. Several techniques have been proposed to achieve high bandwidth. These techniques include: the use of parasitic elements either in the same layer or in another layer [6-8], the use of thick substrates with low dielectric constant [4], and cleft correction [5]. We have used a thick dielectric substrate with low dielectric stability that provides better efficiency, greater bandwidth and better radiation. However, such a configuration will increase the size of the antenna. In order to design a microstrip antenna, higher dielectric constants should be used that are less efficient and lead to a narrower bandwidth. A compromise must therefore be reached between antenna dimensions and antenna performance. This paper provides an outline of procedures for the design of microstrip antenna using the transmission line feed for satellite communication. Unlike slotted antennas, there are other antennas such as DRA (aerial resonance buffer), fractional antenna, etc. to reduce antenna size [15-20]. Hard to design fractal antennas and DRA need to high substrates are not readily available.

II. ANTENNA STRUCTURE

The design of microstrip patch antenna mainly depends on three parameters, namely substrate, constant insulation, high substrate and resonance frequency. In this paper, there are three specific parameters: resonance frequency (f_r) = 3.6 GHz, electrostatic constant (ϵ_r) = 4.4, buffer height of the substrate (h) = 1.6 mm. Fig.1 represents the designed Microstrip Patch antenna.

DESIGN OF FORK SHAPED MICROSTRIP ARRAY ANTENNA USING TRANSMISSION FEED LINE

Doli Likhitha^{#1}, Samiran Chatterjee^{#2}, Meerza Kurshid Beig^{#3}, T. Niharika^{#4},
K. Sandhya^{#5}, M. Subbarao^{#6}

^{#1,4,5,6}Student, ECE Department, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{#2}Associate Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{#3}Assistant Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

Abstract- With a use of transmission line feed fork shaped array MSA is proposed for communication. Resonant frequency has been achieved by use of different length of patch. We try to achieve UWB (Ultra Wide-Band) and VSWR (Voltage Standing Wave Ratio). With the help of MoM based electromagnetic solver, IE3D, we are analyze the different parameters like return loss, radiation pattern, absolute gain (dBi) and VSWR for designed antenna. For communication, MSA design is very easy and avoiding attention and UWB systems have raised renewed interest in broadband antennas. The authorized power levels of the Federal Communications Commission (FCC) mean that every decibel is important in the UWB system - as much or perhaps more than a standard narrowband system. Thus, the effective UWB antenna is an important part of the overall design of the UWB system.

Keywords – Fork Shaped, Feed, Gain, Array, VSWR.

I. INTRODUCTION

UWB is an unlicensed short-range wireless communications system with the ability to deliver high capacity with low power compared to modern wireless systems for short-range applications. After the UWB is issued for an unlicensed application by the Federal Communications Commission (FCC) [1], it receives much less than the resonance frequency of the traditional antenna printed in the same patch area. Researchers are interested because of its inherent properties in low power consumption, high data rate and simple configuration. A microstrip antenna (also known as printed antenna) means a [2-5] antenna fabricated using micro-tape techniques on the PSB. Microwave frequencies are mostly used. The individual microband antenna consists of a patch of metal foil in various forms on the surface of the PCB with a ground strip of metal chips on the other side of the board. Most small tape antennas consist of multiple patches in a two-dimensional array. The antenna is usually connected to the transmitter or receiver via the small tape transmission lines [6-14]. Microstrip antenna is the most suitable device.

II. ANTENNA DESIGN

We design a fork-shaped array structure with four rectangular arrays array elements that are connected by the tape line and using a single feed line feed. We achieve the required resonance frequencies for our required applications and an antenna that applies to S-band and C-band microwave communications. We also connect all the elements of the array with a rectangular conical shape and this conical shape with the strip line connected to the edge of the patch and we use the transmission line feed to achieve the desired resonance frequency. The total track size of the array is 16 mm * 16 mm square with a PTFE FR4 substrate with a static insulator 4.4 and a height of 1.6 mm. All simulations are performed using an IE3D electromagnetic analyzer [21]. Figure 1 shows the proposed antenna structure.

DESIGN OF TWO ELEMENT ULTRA WIDE BAND MICRO STRIP ANTENNA

Dunthula Shravya Reddy^{#1}, Mothe Sathish^{#2}, Samiran Chatterjee^{#3}, G.Santhosh Kumar^{#4},
P. Sai Priya^{#5}, D. Manusha^{#6}, S. Sowmya^{#7}, S.Renuka^{#8}

^{#1,4,5,6,7,8}Student, ECE Department, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-50548

^{#2,3}Associate Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

ABSTRACT- There is a single-layer, compressed size array of dual MSA feeders suggested for connection. The resonance frequency was achieved by using a simple rectangle. We achieve antenna set with UWB (ultra-wideband) and low VSWR (constant wave voltage ratio). The properties of the proposed MSA array are designed using an electromagnetic analyzer based on MoM, IE3D. A comprehensive analysis of return loss, radiation pattern, absolute gain (dBi) and VSWR for the proposed array antenna is presented in this project. In the era of modern communication, the micro-bar antenna is suitable for simple configuration, low lighting and easy manufacturing in nature. There are a lot of antennas that are used to design the structure of the array.

KEYWORDS- Compact, Feed, Absolute gain, Layer, UWB, VSWR

I. INTRODUCTION

To talk about a new era of communication, the microstrip design of the small antenna evokes much interest among young engineers and especially microwave engineers [1]. For microwave transitions, we need a small, lightweight antenna. On this basis, the Microstrip Antenna is the most suitable device. For microwave communication as well as for wireless communication, more than one operating frequency is required per day for many reasons. Operating frequencies are required mainly because most microwave and wireless engineers use different communication bands and engineers use different frequency bands. Therefore, engineers recently designed antennas with multiple properties. Another standard required for antenna design is to reduce the size. Reducing size is the new method. In this way, the size of the antenna is the same as for the conventional antenna. To reduce size, the most useful technique is to cut different structures in the correct position on a traditional microstrip antenna [2-5]. Reducing the size of the antenna means a very low resonance frequency for the cleaved antenna compared to the traditional antenna [6-8]. Unlike slotted antennas, there are other antennas such as DRA (aerial resonance buffer), fractional antenna, etc. to reduce antenna size [15-20]. Hard to design fractal antennas and DRA need to high substrates are not readily available. Today, microstrip micro size of the microstrip is very small and can be reduced to increase demand for applications in various communications, especially microwave and mobile communications [9-10].

An antenna should be of low-profile type with low manufacturing cost, compatible for both non-planar and planar type surfaces, mechanically robust when mounted on rigid surfaces, simple, easy to fabricate [20]. Suitable shape of patch shape and effective mode selection makes it very versatile in terms of impedance, radiation pattern and resonant frequency. In this chapter the design of micro strip antenna with micro strip line which is used for feeding is offered. The micro strip antenna is designed on a dielectric substrate of type FR4 with dielectric constant of 4.4 and thickness of 0.8 mm. More importantly, as per the precise simulation study using electromagnetic three dimensional simulators, the micro strip patch antenna performs in relation to bandwidth and radiation gain.

There is a single-layer, compressed size array of dual MSA feeders suggested for connection. The resonance frequency was achieved by using a simple rectangle. It is designed to increase loss of antenna bandwidth and gain performance. To reduce the size of the antenna substrates, a higher value is determined from the dielectric constant [11-14]. Our goal is to design the antenna with multi-band operation and increase frequency ratio as well as increase operational bandwidth. The simulation was

Design of Wilkinson Power Divider Using Micro-Strip Antenna

Velma Praveena Reddy^{#1}, A.Anusha^{#2}, K.Radhika Reddy^{*3}, J.Ramesh^{*4}, Samiran Chatterjee^{*5}

^{#1,2}Student, ECE Department, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{*4}Assistant Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{*3,5}Associate Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

Abstract: A microstrip array antenna is proposed with a three-layer mono-feed layer for communication purposes. In the field of microwave engineering and circuit design, Wilkinson Power Divider is a specific class of power divider circuit that can achieve insulation between output ports while maintaining a matching state on all ports. Wilkinson's design can also be used as a compound of power because it consists of negative components and then is reciprocal. The proposed microstrip antenna was designed using an electromagnetic analyzer based on MoM, IE3D. A comprehensive analysis of return loss, radiation pattern, absolute gain (dBi) and VSWR for the proposed array antenna is presented in this project. In the era of modern communication, the micro-bar antenna is suitable for simple configuration, low lighting and easy manufacturing in nature. There are four types of feeding techniques used for small tape antenna. In this project we use Transmission line feed technique. In this project we also compare the different types of feed technique. Wilkinson power divider uses quarter wave transformers, which can be easily fabricated as quarter wave lines on printed circuit boards. It is also possible to use other forms of transmission line (e.g. coaxial cable) or lumped circuit elements (inductors and capacitors). There is a great divider we achieve more output power than directional couplers.

Key Words - Feed, Absolute gain, Wilkinson Power Divider, Beam-width.

1. INTRODUCTION

To talk about a new era of communication, the microstrip design of the small antenna evokes much interest among young engineers and especially microwave engineers [1]. For microwave transitions, we need a small, lightweight antenna. On this basis, the Microstrip Antenna is the most suitable device. For microwave communication as well as for wireless communication, more than one operating frequency is required per day for many reasons. Operating frequencies are required mainly because most microwave and wireless engineers use different communication bands and engineers use different frequency bands. Therefore, engineers recently designed antennas with multiple properties. Another standard required for antenna design is to reduce the size. Reducing size is the new method. In this way, the size of the antenna is the same as for the conventional antenna. To reduce size, the most useful technique is to cut different structures in the correct position on a traditional microstrip antenna [2-5]. Reducing the size of the antenna means a very low resonance frequency for the cleaved antenna compared to the traditional antenna [6-8]. Unlike slotted antennas, there are other antennas such as DRA (aerial resonance buffer), fractional antenna, etc. to reduce antenna size [15-20].

Hard to design fractal antennas and DRA need to high substrate substrates are not readily available. Today, microstrip micro size of the microstrip is very small and can be reduced to increase demand for applications in various communications, especially microwave and mobile communications [9-10]. In the field of microwave engineering and circuit design, Wilkinson Power Divider is a specific class of power divider circuit that can achieve isolation between output ports while maintaining a matching state on all ports.

Wilkinson's design can also be used as a compound of power because it consists of negative components and then is reciprocal. This circuit was first found by Ernest J. Wilkinson in 1960, widely used in radio frequency communication systems using multiple channels since the high degree of isolation between output ports prevents crosstalk between individual channels. The scatter parameter is given to the common situation of the Wilkinson power divider at two times the design frequency by:

MULTIBAND CIRCULAR MICROSTRIP ANTENNA USING TRANSMISSION LINE FEED

Surabhi Anitha^{#1}, K. Sandhya Rani^{#2}, A. Nikhil Reddy^{#3}, B. Pavani^{#4}, Samiran Chatterjee^{#5}

^{#1,2,3,4}Student, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{#5}Associate Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

Abstract- In this project, a Microstrip Patch antenna is introduced to connect to the microwave. The microstrip patch antenna theory is used to design small slots to obtain the required broadband. The projected antenna is emulated using New Zealand's IE3D program, which uses a MoM-based system. A simulated test of this antenna was performed for a frequency range of 1 to 10 GHz. Several antenna characteristics such as return loss, radiation pattern, percentage bandwidth, directivity, antenna gain, radiation efficiency, voltage standing wave ratio, return loss, and gain etc. are studied for the proposed antenna with conventional circular microstrip patch antenna of same dimensions. The circular patch antenna is designed on a FR4 substrate with dielectric constant $\epsilon_r = 4.4$ and height of the substrate is 1.6 mm. We are trying to design circular patch antenna of return loss value below -15dB. Since the circular microstrip patch antenna is designed for satellite communication applications such as transponder etc. The simulated parameters are good enough for the intended applications.

Keywords – Dual-Band, Slot, Dielectric Constant, Circular patch, Gain, VSWR

I. INTRODUCTION

In the new communications era, the microstrip design of the small antenna creates challenges among young engineers, especially for microwave engineers [1]. For microwave transitions, we need a small, light-weight antenna, and on this basis the Microstrip Antenna is the most suitable device. For microwave communication as well as for wireless communication, more than one operating frequency is required per day for many reasons. Operating frequencies are required mainly because most microwave and wireless engineers use different communication bands and engineers use different frequency bands. Therefore, engineers recently designed antennas with multiple properties. Another standard required for antenna design is to reduce the size. Reducing size is the new method. In this way, the size of the antenna is the same as for the conventional antenna. To reduce size, the most useful technique is to cut different structures in the correct position on a traditional microstrip antenna [2-5]. Reducing the size of the antenna means a very low resonance frequency for the cleaved antenna compared to the traditional antenna [6-8]. Unlike slotted antennas, there are other antennas such as DRA (Insulated Ring Antenna), Fractal Antenna, etc. used to reduce antenna size [15-20]. Hard to design fractal antennas and DRA need to high substrate substrates are readily available. Today, microstrip micro size of the microstrip is very small and can be reduced to increase demand for applications in various communications, especially microwave and mobile communications [9-10].

Microstrip antenna widely used in the defence systems like missiles, aircraft, satellites and rockets. The large bandwidth of UWB antennas will improve the performance in the various applications of communication. A Micro Strip Antenna consists of a tiny metallic patch etched on a dielectric substrate. These antennas are mechanically rugged, compact conformable to planar and non-planar surfaces and relatively cheap to manufacture with the latest printed circuit technology. Apart from the rectangular micro strip antennas, circular micro strip antennas are also more popular due to their convenient shape. Antenna design is one of the primary challenges in the development of UWB systems especially when low cost, compact and radiation efficient structures are required for UWB and radar systems.

II. ANTENNA STRUCTURE

The proposed dual layer triple transmission line feed antenna shows in following figure is designed on FR-4 substrate having relative permittivity $\epsilon_r = 4.4$. To obtain impedance matching between the feeding and the radiation element, the signal strip width of the upper-side will be cut from radiating disk element. The antenna size is 12 mm * 12 mm and is separated from the ground plane by 1.6mm. Top layer of proposed antenna consist of a circular patch of radius 12 mm. We cut two unequal rectangular patch with adding one rectangular slits from the upper layer and the bottom layer consisting of rectangular patch of 12 mm x 12 mm. We also cut two unequal rectangular slots with adding of two equal rectangular slots from the bottom layer which also acts as a dielectric substrate. The resonant frequency (fr) can be calculated as:

Transmission Line Feed Wide Band Antenna for Satellite Communication

Hambire sushma^{*1}, Samiran Chatterjee^{*2}, D.Pushpalatha^{*3}, Narmala Raju^{*4}, Godari Nikhila^{*5}, Anasoori Srujana^{*6}, Annadi Srivani^{*7}, Golle Rajender^{*8}

^{*1, 5, 6, 7, 8} Student, ECE Department, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{*2, 3, 4} Associate Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

Abstract: Satellite plays an important role in the interaction between different satellite subsystems and Earth during operations. Antennas are transmitted to the downlink signal and receive the uplink signal. It gives signal connection to primary satellites. The condition of the satellite antenna is to cover the required area. Today, microstrip patch antennas determine their request in satellite space communications, biomedical and so on. Insist on the small size, low cost, small shape, and flat construction of the antenna to be carried out on consumer terminals. Microstrip-integrated antennas have increased interest in mobile satellite data systems. Transmission line-fed antennas have features like easy integration for monolithic integrated circuit, low dispersion, and low radiation loss with dual layer and rectangular patch and slots are cutted from the top and bottom layer with the use of transmission line feed. In this paper, we discussed the effect of parasitic patch over the microstrip antenna. We use three transmission line feed where we analyze that for all the ports in active condition means the proposed antenna gives a wide bandwidth rather the single port active and other act as a parasitic patch. We achieve the 5.94 GHz wide satellite band and 259.630 by design of simple structure in the top and bottom layer of the patch. The work is designed by the MoM based software IE3D.

Keywords— Compact, Patch, Layer, Impedance, Band-Width.

I. INTRODUCTION

The microstrip antenna concept was introduced for the first time in the 1950s. Microstrip antennas have many advantages such as their use in commercial and military applications. However, the conventional microstrip antennas have a bandwidth of only a few percent resistance and the radiation pattern with the omni-directional radiation scheme, which obviously does not meet the ultra-wide bandwidth requirements (UWB), high gain, miniaturization, circular polarization, [1-6], we have a wide range of microstrip antenna topologies, including structures of different microstrip antenna elements and different microstrip array arrangements [7-15].

To replace the conventional bulky antenna we have some microstrip antennas with special topologies, like quasi-Yagi, planar reflector antenna. This paper outlines the procedures for designing a microstrip antenna using the feed of the transmission line for satellite communications. Unlike other antennas, there are other antennas such as DRA (aerial resonance buffer), fractional antenna, etc. to reduce the antenna size [16-21]. Fractal antennas are difficult to design and need DRA to high dielectric substrates are not readily available.

The primary objective of this paperwork is to provide an extensive overview of design analysis and microstrip antenna improvement criteria and its application in the next generation and also to provide a cost-effective solution. In addition, it aims to provide a direct forward-looking approach to optimizing the microstrip antenna, operating within the frequency band to improve performance. Because the size of the microstrip antenna is inversely proportional to its frequency, the larger the antenna, the less it can detect. For this single reason, microstrip antennas are generally antennas capable of sensing low frequencies unlike microwave, and detect large frequencies; making it difficult to use in smaller electronic devices.

The simulation was performed by IE3D [22] using MoM method. Due to their small size, low cost and light weight, this antenna is a good candidate for the intended application.

II. ANTENNA DESIGN

The proposed antenna configurations are displayed in Figure 1 and Figure 2. Two straight equal slots (L1, L2) are cut at the bottom of the left and right side of the patch edge and one parallelogram slot inserted at the top of the patch in the upper layer shown in Fig. -1. One rectangular patch is cut on the left side of the patch edge from the bottom layer and a rectangular slot with triangular slit is also removed on the right side of the patch edge of the bottom layer, i.e. at the ground level as shown in Figure 2. The specified materials for this paper are PTFE substrate with dielectric constant (ϵ_r) = 4.4 and height of substrate (h) = 1.6 mm. Single transmission line feed is used in the top layer and twice transmission line feed is used in ground layer. Figure 1 displays designed antenna top layer structure and Figure 2 displays designed antenna ground layer structure.

HALF TONE VISUAL CRYPTOGRAPHY

Madishetty Saisanthosh Raviteja^{*1}, Kondam Radhika Reddy^{#2}, Kamsani Akhil³, Burra Raju^{#4}

^{*1, 3} Student, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{#2} Associate Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

^{#4} Assistant Professor, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana-505481

ABSTRACT: Visual cryptography could be a variety of cryptography that permits the visual info to be encrypted in such some way that their decoding may be performed by human sensory system. It encodes a secret binary image into shares of different binary patterns. When the shares are xeroxed onto transparencies, the secret image can be visually decoded by superimposing a set of transparencies. But the shares of the decoded image haven't any that means. Extended visual cryptography was proposed to construct meaningful binary images as shares, but the visual quality is poor. In this , a technique named halftone visual cryptography is implemented to achieve visual cryptography via half toning. This technique utilizes the void and cluster formula to code a secret binary image into halftone shares (images) carrying vital visual info. The simulation shows that the visual quality of the obtained halftone shares is unnoticeably higher than that earned by any on the market visual cryptography technique.

Keywords- Halftone, GrayScale, VC.

JETIR

1. INTRODUCTION

Visual cryptography (VC), made-up by Noar and Shamir , is a method for protecting image-based secrets that has a computation-free decoding process. In the VC scheme, the input image is transformed into noise-like shares to ensure that the contained secret is unreadable. These shares may be written on clear slides and distributed to the participants. Any set of or a lot of shares will decode the key within the original image, but no information about the secret can be obtained from fewer shares. The decoding method in a very VC theme involves inspecting the stacked shares with the unaided eye while not computation. The ciphering model of VC is comparable to a one-time pad within the sense that every image is decrypted with a unique set of shares, and provides high security to the protected secrets.

Following the pioneering research of Noar and Shamir, Ateniese et al. extended the VC scheme to general access structures where the dealer can specify all qualified and forbidden subsets of participants, with participants in a qualified subset being able to reveal the key within the image and people in a very taboo set not having the ability to try and do therefore. In general, there square measure 2 vital parameters for a VC scheme: 1) the element enlargement, which refers to the number of pixels in a share used to encode a pixel of the secret image and 2) the contrast, which is the luminance difference between black and white pixels in the reconstructed image. For a VC theme, a smaller pixel expansion benefits the printing out and storage of shares and a high contrast makes the revealed secret easier to recognize by the unaided eye.

The conditions of most distinction and minimum element enlargement for a VC theme are mentioned previous. Proposed progressive VC schemes using more flexible decryption effects to produce higher quality images stack increasing numbers of shares. There have also been some VC schemes proposed for sharing non-bi-level secrets. VC schemes reported in the literature usually process the content of an image as a single secret; that is, all of the pixels within the secret image square measure shared employing a single coding rule. This type of sharing policy reveals either the whole image or nothing, and hence limits the secrets in an image to have the same secrecy property. A technique for recursively concealment secrets in VC was projected by hierarchically embedding multiple secrets of various sizes at various levels of a picture. There have additionally been efforts to share multiple secrets in 2 pictures.

All of these methods are based on superimposing the two shares at different angles. "In this paper, we tend to think about the content of a secret image with multiple regions, wherever every region includes a particular sure level of secrecy". In this scheme, the secrets in the original image are hidden in such a way that more levels of secrets are revealed when more shares are obtained in the decoding process. This property of progressive revealing of the quantity of secrets in a picture widens the attainable applications of VC schemes.

WIRELESS INFLUENCED BLUETOOTH IN HOSPITAL MANAGEMENT SYSTEM

¹B.Sai Spoorthy, ²N.Venkateswaran, ³Y.Aparna, ⁴A.Pravalika

^{1,3,4} Students, ²Associate Professor, Department of Computer Science and Engineering, Jyothishmathi Institute of Technology and Science, Karimnagar, Telangana-505001.

Abstract: The article describe a Bluetooth based hospital management system which provides sufficient facilities to the doctors, staff nurses and In and Outpatients' parties to share information among them without others in person. By deploying wireless based Bluetooth technology, we can reduce the electromagnetic frequency(EMF), when compared to wifi. The key features of Bluetooth are Robustness, low power, and low cost and, data and voice transmissions can be handled simultaneously. As wifi is a reasonably fast method of transmitting information in the waveform, it emits a wide range of electromagnetic frequency which is harmful to the patients. In other hands, using Bluetooth, the records of hospital management are better on security and privacy standards. This paper provides ample information related to providing flexibility for users and management to deliver the best security and user-friendly and safe environment.

Index Terms: Bluetooth, wireless Networking, Hospital Management System, Bluetooth Beacons

I. INTRODUCTION

In recent years, wireless based network infrastructures, identifying cellular networks, are becoming an essential factor for exchanging electronic data in low-income countries. Several key sectors deploying and the health care sector is also aiming to tackle outstanding challenges like providing basic health care services to remote communities by using cheap mobile devices [1]. Selecting Bluetooth technology as a data transfer medium has some specific advantages. Now there are various types of wireless networking technology mainly like Wi-Fi, RFID. The main advantages of Bluetooth over Wi-Fi technology are that in the hospital area, there are many patients having bypass surgery. The interference level of Wi-Fi is so high that it interferes with the can break the instruments down. In Bluetooth technology, there is no such type of interference happens and the cost is too low compare to Wifi, gives us the very flexibility. The deployment and maintenance cost of Wi-Fi-based system is much higher than the Bluetooth based systems.

II. MOTIVATION

In urban hospitals, the facilities available for health caring are very limited. The poor hospital management enables issues and cheap devices which generate a frequency of radiation that may be harmful to the patients. Everyone should get the knowledge of own health as easy and as early as possible. Also, it should be worth for each. The recent medical report of The India Spend analysis of data says that around 5 lakhs doctors shortage in India. The system defines the standards for doctor-patient ratio will be 1:1000 which has been failed in India [2]. In developing countries, there is a need for resources and management to reach out to the problems. By motivating the situation, We came with an idea, which helps patients to put away from harmful cheap devices by adopting wireless Bluetooth technology with reducing the radio frequency. The system reduces time with safely handled equipment.

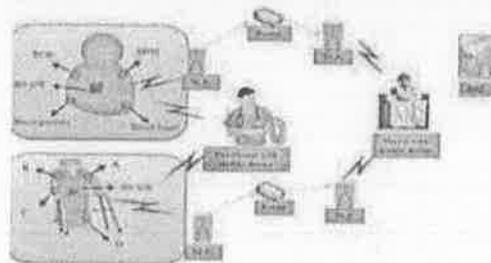


Fig 1: Wireless based HMS

DESIGN OF LOW POWER AREA EFFICIENCY CSLA USING BEC-1 CONVERTER

N. Umapathi¹, A. Malathi², V. Saugeetha³, R.Valshmitha⁴, K. Sai⁵, K.Thiromala⁶

¹Associate Professor, Jyothishmathi Institute of Technology & Science, Karimnagar, Telangana - 505481

^{2,3,4,5,6}, IV ECE Students, Jyothishmathi Institute of Technology & Science, Karimnagar, Telangana -505481

Abstract: As we know the analysis of conventional carry select adder from its structure it is clear that there is a scope to reduce the area so it leads the low power consumption and high speed of operation, so it increases the DSP system performance and reduces the complexity of the processor. In this project we implemented the low power area efficient carry select adder by using binary to excess -1 converter. the main function of the binary to excess -1 converter is the logic comes from the lesser number of logic gates as compared to the n-bit ripple carry adder (RCA).CSLA designing with ripple carry adder is not efficient because it uses the multiple number of ripple carry select adders to generate the partial sum and carry by using the carry input. Then the final sum and carry is selected by the multiplexers . so this idea we are uses the binary to excess-1 converter it has less logic gates less power less cost, convenient to handle most used in VLSI systems.

Index Terms - CSLA, RCA, BEC,

INTRODUCTION:

Adder is major part of the processor , as a single processor uses the several adders so in order to design efficient adder it improves the system performance . Initially carry select adder is one of the fastest adder in the digital data processing units. The ripple carry adder is a complex adder. Mainly the ripple carry adder consists of the many cascaded single bit full adders by this we can achieve a simple and efficient but it is very slow process i.e, speed is very low .in carry select adder there will be two ripple carry adders according to the logic we can get the output in carry select adder the delay will reduced as compared to the ripple carry adder.

In this CSLA uses a ripple carry adders which has large area consumption so the proposed technique reduces all the redundant logics by using binary to excess -1 converter .it gives good performance and better output than conventional carry select adder. in my proposal system the final sum is carried before the calculation where as in conventional CSLA it is not done there is also reduces the power delay. here we are using two different carry words($c_{in}=0, c_{in}=1$)these fixed bits are going give the logic optimization of carry select and carry generation.

many electronic applications adders play important role , the applications like calculation dsp algorithms like DFT,FFT it requires more number of calculations and complexity increases CSLA is the one of the most simplest adder it alleviates the problem of propagation of carry but it has high area requirement and high power, it can be reduced by binary to excess -1 converter

LITTURATURE SURVEY

The main reason for using the carry select adder with BEC is to reduce the no. of gates when compared to normal Wallace multiplier. The 1'b1 case in normal CSA is replaced by BEC. The result from 1'b0 case is given as inputs to the BEC adder. Design of high speed data path logic systems are one of the most substantial research area in VLSI system design. High speed addition and multiplication has always been a fundamental requirement of high performance processors and systems. The major speed limitation in any adder is in the production of carries and many authors have considered the addition problem. The basic idea of the proposed work is using n-bit Binary to Excess-1 Converters (BEC) to improve the speed of addition. This logic can be implemented with Carry Select Adder to Achieve Low Power and Area Efficiency. The proposed 32-bit Carry Select Adder compared with the Carry Skip Adder (CSKA) and Regular 32-bit Carry Select Adder. The main advantage of this Binary to Excess Converter (BEC) is logic comes from the lesser number of logic gates than the n-bit Ripple Carry Adder (RCA). A structure of 4-bit Binary to Excess Converter (BEC) and the truth table is shown in Fig.1.1 and Table 1 respectively.

A COMPREHENSIVE SURVEY ON DISTINCTIVE IMPLEMENTATIONS OF CARRY SELECT ADDER

¹N.Umapathi, ²Murali Krishna, ³P Swetha

¹Associate Professor /Department of Electronics and Communication Engineering

^{2,3}M.Tech(VLSI Design), Department of Electronics and Communication Engineering

^{1,2,3}Jyothishmathi institute of Technology & science, Karimnagar – Telangana.

Abstract – VLSI technology is everywhere in digital world. The real applications of VLSI technology are personal computers, cell phones, digital camera or camcorders. The important parameters for these applications are speed, area and power consumption. The main component of modern digital devices is adders. In signal processing adder plays a vital role. We have many kinds of adders. Each adder has its own functionality. To reduce the fundamental problems i.e., speed, area and power, many new adders are invented. Carry select adder(CSLA) is the important adder among the adders. The propagation delay of carry select adder(CSLA) is better than other adders but the key issue is with its power consumption and area. In this brief, we have discussed about different implementation logics of carry select adder(CSLA) and the comparative analysis has been done for different types carry select adders(CSLA).

Key words – Ripple Carry Adder(RCA), Carry Select Adder(CSLA), Binary to Excess-1 Converter(BEC), Combination Boolean Logic(CBL), D-latch.

I. INTRODUCTION

Very large scale integration(VLSI) is one of the most widely used technologies for microchip processors, integrated circuits(IC) and component designing. Such applications require high speed, low power and less area. One of the most trending areas for research in VLSI system design is the designing of area, power efficient, high speed data path logic systems. In order to get the VLSI circuits with small computational delay, we have to change the adder circuit. Adder is the basic component of central processing unit(CPU), arithmetic logic unit(ALU). ALU performs both logical and arithmetic operations such as AND, INV, OR, comparison, multiplication, division, addition, subtraction. Adder circuit is the part of all the operations.

An adder takes the inputs in the form of binary format, performs addition operation. Apart from ALU, it is also used in other applications like digital filter applications, digital transformation applications (FFT, IFFT etc.), digital modulators, image processing. Adder circuit has a very impact on the most of the applications. The performance of adder plays a key role for such applications. So, the VLSI system designers need to concentrate on, how to increase the speed. Also, there is a necessity to minimize the chip area as well as power consumption. Now-a-days portable devices have a high demand. Example for such devices is mobile phones. So, there is a balance required in between speed, area and power consumption.

Half adder was the basic adder. It takes two inputs and generates the outputs as sum and carry. After half adder, full adder (FA) was invented. Full adder takes three inputs and gives two outputs. When full adders are connected in series, the carry out of one full adder was given as carry in for the next full adder. This makes the great advantage for full adder but with increasing computational delay.

There are many types of adders are invented such as ripple carry adder (RCA), carry look ahead adder (CLA), carry select adder (CSLA), carry skip adder (CSKA) and carry save adder (CSA). Among all ripple carry adder was easy to fabricate but its computational delay is more i.e., speed is less. In order to overcome delay, carry select adder (CSLA) was proposed. CSLA was constructed by two ripple carry adders (RCA) and outputs are selected by multiplexers. To improve the efficiency add-on circuit was used in CSLA.

This paper organized as follows: section II describes about basic modules, section III explains about literature review of CSLA. Section IV describes about comparative analysis of different CSLA. In section V conclusion has been done.

DETECTION OF EXPLOSIVE SEWAGE GASES IN DRAINAGE SYSTEMS USING AN ARDUINO

¹N. Umapathi, ²SaiTeja, ³Roshini, ⁴Saikiran

¹Associate Professor, ^{2,3,4}B.Tech - ECE, III Year students

^{1,2,3,4} Department of Electronics and Communication Engineering

^{1,2,3,4} Jyothishmathi Institute of Technology & Science – Karimnagar, Telangana, India.

Abstract– This paper explores the idea of the detecting sewer gases that get exist in drainage systems. The interest of this paper is on safety of people who work in drainage systems. These so called sewer gases can be detected by making use of some sensors like MQ 4, MQ 7 and MQ 136 which can detect Methane, carbon Monoxide and Hydrogen sulfide respectively are interfaced with an arduino microcontroller, LCD display and GSM module can collectively produce an output which can alert the people in that area and also can inform the presence of sewer gases to the authorities, thereby preventing or decreasing the chance of risk.

Index Terms- CH₄, H₂S, CO, GSM

I. INTRODUCTION

Due to the endless ever growing human population, the people voluntarily or involuntarily make their surroundings unhygienic by dumping organic and inorganic materials in the drainages. This dumping results in release of sewage gases like Methane, Hydrogen sulfide, Carbon monoxide and their components. These gases when inhaled by people may cause some short term effects like dizziness, loss of consciousness, suffocation and also some long term effects like lung cancer, nausea, skin infections. Subsequently, there is also a high probability of risk of death when exposed to these gases for longer periods. Sewer gases like CH₄ and H₂S are even explosive. Any wrong step in these areas can cause a great hazard. Hence there is a dire necessity to identify the presence of these sewer gases in the drainage systems where all the dumping takes place.

II. LITERATURE SURVEY

Sensing of toxic gases that exist in environment using Arduino microcontroller to help the workers and alert on danger of being in that area and send the message to base station through GSM module and displaying the alert message on LCD display using microcontroller[1]. Monitoring the pollutants concentration from water surface by inspecting wells also monitoring the pollutants concentration in the air near by inspection wells, and assessing the impacts of gases emission on urban drainage system [2].

Designing microcontroller based toxic gas detecting, alerting system and also gas purification system. The hazardous gases like H₂S, CO and Methane will be sensed and displayed each and every second in the LCD display [3]. To alert the people on presence of harmful gases using poisonous gas detector by building a system using ATmega 328 controller which makes the system cost efficient[4]. Make use wireless communication technologies like WIFI and Zigbee and developing a system to detect four gases like Cl₂, CO, NO₂ and SO₂ that prevail in drainage systems[5]. Using of WSN based Air Pollution monitoring system to collect the pollutants like CO₂, NO₂ and SO₂ from environment to evaluate the quality of air in specific area[6].

Monitoring the gases in an area from anywhere by giving command and uploading it to cloud to access it anywhere around the globe by using Internet of Things[7]. This paper is more advantageous because the system we built is portable and very much cost efficient.

III. PROPOSED METHOD

HARDWARE USED:

The system we proposed include gas sensors like MQ 7 (Carbon monoxide sensor), MQ 136 (Hydrogen sulfide sensor), MQ 4 (Methane sensor) and also a control base unit Arduino that intake all the information from this sensors. We use a GSM module to send the statistics of the data we collected from the sensors which is to inform authorized person by sending an SMS and also we have an LCD display to alert the people near the place where gases exist

IDENTIFICATION OF SOIL FERTILITY USING OPEN HARDWARE(ARDUINO)

¹N. Umapathi, ²S.Nithish Kumar, ³M.Monika, ⁴M.Sahithya

¹Associate Professor, ^{2,3,4}B.Tech - ECE, III Year students

^{1,2,3,4} Department of Electronics and Communication Engineering

^{1,2,3,4} Jyothishmathi institute of Technology & Science – Karimnagar, Telangana, India.

Abstract: The sustained cropping without any testing of soil and measurement of nutrients present cause less yield in the agricultural sector. It is paramount for the healthy growth of the crop and also in producing high yield. Here, Soil plays a crucial key role in the yield of crop. The amount of nutrients obtainable to the roots is the chief factor limiting the yield of the crop. Nitrogen, Phosphorous and Potassium are macro nutrients, where as the micro nutrients are Iron, copper and zinc. To preside over the quality of the soil, here the electrochemical sensor is used with Arduino microcontroller. It's principle is based on the absorption of the ions present in the soil and by showing the measurements of soil from the aqueous solution.

Index Terms- Nitrogen, Phosphorous, potasslum, electrochemical sensor, Arduino.

I. INTRODUCTION

Conventionally, for a crop the roots absorbs the water as well as required amount of the nutrients. The supplying of nutrients from outside of the soil for the root environment is known as Fertilization. If there is no enough supply of nutrients to the soil, automatically less yield of crop is produced and scant development of crop. Before any land usage, the soil is to be tested because if the soil fertility is more it helps in increase of agricultural land. If there is no fertility, it can be used for other purposes. The information regarding the fertility of soil after testing is to be sent to higher authorities to save the land for agriculture. Fertile soil produces high yield crop. These days soil quality is decreasing due to many reasons. some of they are soil pollution and soil acidity and decline in organic matter status. Scarce in micro and secondary nutrients in soil lead to mineral deficiency disorders.

However a certain proper distribution is necessary for a good crop production. In some of the places in our country we can see the traditional system where there is no exculpation of soil. Soil testing should be done time to time. In the coming years we can see there is an intensify demand for the food production. The improper use of fertilizers or nutrients can damage the crop, which results the destitute (poor) quality of food products. Technology plays a crucial role for the furtherance of food production in a hygiene way. Wireless sensor networks are extensively used in farming lands to develop or increase the productivity. Different types of sensors are used which performs disparate tasks like water monitoring, soil moisture monitoring, in determining temperature, depth of soil, pH value of the soil. Gathering the samples of soil also plays an important role. It had got a exceptional significance in agricultural for the future monitoring of soil nutrient standing of various locality.

II. LITERATURE SURVEY

Plants extract nutrients that they need for their growth from the soil. Which are classified as macronutrients and micronutrients. Macronutrients are those that are needed in large amounts, while those needed in small amounts are called micronutrients[1]. The Macro nutrients are essential elements used by plants in relatively large amount for plant growth are Nitrogen (N), Phosphorous (P), Potassium (K), Calcium (Ca), Magnesium (Mg) and Sulphur (S)[2]. Geographic information system (GIS) is a powerful tool which helps to integrate many types of spatial information such as agro-climatic zone, land use, soil management, etc[3]. Different types of lands are used in yielding different types of crop for example 1. clay land for cabbage, broccoli and not for root vegetables. 2. sand soil for root based vegetables 3. Loam soil provides best necessary elements 4.

Silt is a very fertile soil 5. Peat soil used for root crops ,cabbage ,spinach.[4]. The electrochemical sensor have the potential to be produced in batches to very small size by using MEMS-based micro fabrication technology at low costs[5]. Land-use changes associated with increased urbanization will alter soil temperature and moisture regimes due to the urban heat island effect and modified hydrology[6]. Plants extract nutrients that they need for their growth from the soil. Which are classified as macronutrients and micronutrients. Macronutrients are those that are needed in large amounts, while those needed in small amounts are called micronutrients[6]. Technology plays an expedient role for the improvement of environment and for achieving the economic goals. Precision Agriculture (PA) - based geo-spatial technologies, such as global positioning system, geographical information system, remote sensing, geo-statistics and variable rate applications can be used for obtaining efficient nutrient management in crop fields[7]. There are many methods to test soil for example optical transducer for NPK soils detection and is formed by the integration of light transmission system and light detection system[8].

COMPARATIVE PERFORMANCE ANALYSIS OF DISCRETE COSINE TRANSFORM AND WAVELET BASED IMAGE COMPRESSION

Badri Sai sri ¹, Karthick Ganeshan², Shanthula Manoj ³, Kaasam Bhagya sree⁴, Thirunahari Vaishnavi⁵, Muduganti Revanth Reddy⁶, Asiya siddiqua⁷

^{1,4,5,6,7} Student, ECE Department, Jyothishmathi Institute of Technology & Science (Affiliated to JNTU, Hyderabad), Nustulapur, Karimnagar, Telangana.

² Associate Professor, ECE Department, Jyothishmathi Institute of Technology & Science, Nustulapur, Karimnagar, Telangana.

³ Assistant Professor, ECE Department, Jyothishmathi Institute of Technology & Science, Nustulapur, Karimnagar, Telangana.

I. ABSTRACT

Compression indicates the decreasing in size of image without decreasing the quality of the input image. The widely addressed researched area in the application of compression on images is Image compression. The importance of compression of image is to decrease the redundancy and irrelevancy in the image given as input, such that the image can be collected and can be transmitted substantially. There are several compression standards present in this compression of image but even there is a scope for high compression in quality of reconstructed image. The image compression contains two techniques depending on the compressed image, to be exactly same as the original such as lossy techniques and lossless techniques. The DCT(Discrete cosine transform) can be used by JPEG in the compression of images. Different aspects in image compression gives wavelet image compression introduction. The results thus obtained from the output proves the analysis of compression using DCT and DWT depending on the PSNR, MSE values as well as the compression ratio without the image quality degradation.

Keywords: Image Compression, Discrete wavelet transform, Discrete cosine transform

II. INTRODUCTION

Image compression determines the compressing of images without reducing its quality. Main advantage of this is to minimize the overabundance and diversion in the images, so that accurately they can be collected and transferred. There are two types in Image compression lossy and lossless. Lossless compression is more preferable than lossy compression for archival purposes as well as medical imaging, technical drawings, clip art, comics etc. In order to introduce compression artifacts especially when used at low bit rates, Lossy compression methods are used. These lossy techniques are suitable for natural images such as photographs where loss of fidelity which is minimum is accepted in bit rate in order to achieve the reduction substantially.

ISO (International Standards Organization) and IEC (International Electro-Technical Commission) are entrenched by the JPEG or 'Joint Photographic Experts Group' for compression of still images. At low bit-rates the performance of these code decreases because of the underlying block-based DCT scheme. The wavelet based transform has emerged recently in the field of image compression as a cutting edge technology. At higher compression ratios Wavelet-based coding provides considerable improvements in image quality. A variety of substantial and knowledgeable wavelet-based schemes for image compression have been developed and implemented from the past few years

DENOISING USING SPECKLE NOISE REDUCTION FILTERS

Velpuri Sushmitha¹, Karthick², A.Sreeramulu³, Chillumula Ravali⁴, Kallepelli Anusha⁵, Thigala Praveen⁶,
Siripuram Sai Vineeth⁷

^{1,4,5,6,7} Student, ECE Department, Jyothishmathi Institute of Technology & Science, Karimnagar,
Telangana.

^{2,3} Associate Professor, ECE Department, Jyothishmathi Institute of Technology & Science,
Karimnagar, Telangana.

ABSTRACT

Noise reduction is often necessary and the first step to be taken before analyzing image data. The main goal of digital image processing is to remove various noise from all kinds of different images. It is therefore necessary that you have knowledge of the various noise in the image to determine the appropriate noise reduction algorithm. Noise is particularly affected by images taken from satellites, which reduces image quality. There are many reasons for this noise, such as salt, pepper, speckle, Gaussian. Because noise is very specific, many noise removal methods are designed for this purpose only. There are also some general methods for removing noise that have been slightly modified in order to remove noise spots. In this paper, filters reduce the spots are the frost filter, Gaussian filter smooth and the average filter which must be done based on the specific results for different noise conditions. This paper explains the techniques of the image noise reduction filter based on image quality standards at a different level of noise images.

Keywords: Salt and Pepper, Gaussian noise, Speckle noise, Frost filter, Gaussian smooth filter and Averaging filter

I. INTRODUCTION

Speckle Noise is the noise caused by the environmental conditions on the imaging sensor when the image is obtained. Color noise [1] is mostly detected in the case of medical images, active radar images and SAR images. Various researchers have conducted experiments to overcome this type of noise using different filtering techniques. In this paper, we provide a brief analysis of the various techniques used to reduce the noise of image spots taken from Matlab or any other source. Importance of applying advanced digital image processing techniques to improve quality by removing noise components in the image obtained for a better image [2].

Several methods are used to reduce the noise based on different mathematical models of this phenomenon. Here considered speckle noise and denoising process Frost filter, Gaussian smooth filter and Averaging filter are used. Using these filters, get a better output image than other filters. Finally, performance of denoising process techniques is compared with image quality metrics like PSNR, AD, NCC, IF, SC. This paper is further organized by Section II describes literature review. Section III discusses speckle reduction filter techniques. Section IV focus on the Quality metrics. Section V contains results and conclusion.

IMAGE INDEXING USING INTEGRATION OF GABOR FILTER AND HSV ALGORITHM

A.Nikhitha¹, Karthick², M.Ramesh³, A.Nithish⁴, A.Vennela⁵, R.Arunraj⁶, P.Smitha Mayuri⁷

^{1,4,5,6,7}Student, ECE Department, Jyothishmathi Institute of Technology and Science, Karimnagar, Telangana.

²Associate Professor, ³Assistant Professor, Department of Electronics and Communication Engineering, Jyothishmathi Institute of Technology and Science, Karimnagar, Telangana.

Abstract

Content based image retrieval (CBIR), is the most important areas of digital image processing and has become a new and fast way to retrieve images. As the image database grows faster, a better mechanism is needed to retrieve images and get better results. CBIR allows the user to provide a query image to retrieve images stored in the database according to their similarity to the query image. In this paper, content-based image retrieval is used to retrieve a query image from a large image database using two attributes such as color and texture. The color features are extracted through the Hue Saturation Value (HSV) color space and we use Gabor filters to extract texture features from random, separate regions of the image after the segmentation to increase system efficiency. This Reduces recovery time and increases image resolution.

Keywords: Content based image retrieval (CBIR), Hue Saturation Value (HSV), Gabor filters

I. INTRODUCTION

Nowadays, in communication and information image retrieval is a major topic. Image collection is increasing speedily as enhance in image capturing devices like smart phones, digital cameras, and also with increased use of multimedia data. To search and retrieve image from such large image data collection effective tools are needed for different. In early era, text based image retrieval used. All text based image retrieval systems require the text description with images in large scale data bases and manually this task is not effective. Because of this, text based image retrieval systems were not applicable for task dependent queries. To overcome these problems content-based image retrieval (CBIR) was introduced. Content based image retrieval is a powerful tool used to retrieve the image based on visual contents such as color, texture and shape from large database. To deal with image retrieving and indexing brief knowledge of image classification is required. Some of the main applications of CBIR system are biomedical imaging, Face Recognition, Geographical changes, Identification of Fingerprint, Crime Prevention, Digital Libraries, Graphic and Fashion Design, Cultural Heritage, skin detection etc.

1.1 Content Based Image Retrieval

Image-based image retrieval, a feature-extraction technique for searching images from large image databases according to user interests, has been inactive and fast in search since the 1980s. During the past years, remarkable progress has been made in research and system development. Hence, there are remaining challenging research problems still attract researchers from multiple disciplines. Previous techniques were based on the textual annotation of image but not on the visual content of images. From text descriptions, images can be organized by topical or semantic hierarchies from lookup table and to facilitate easy navigation and browsing based on standard Boolean queries.

Image Segmentation using Distance Regularized Level Set Evolution method

Arroju Anusha¹, G.Karthick², Ch.Srividya³,Loka Rachana⁴,Akoju Shirisha⁵,Nalla Mahender Reddy⁶,

Jakkani Laharika⁷.

^{1,4,5,6,7}Student, ECE Department, Jyothishmathi Institute of Technology & Science, Karimnagar, Telangana.

²Associate Professor,³Assistant Professor, ECE Department, Jyothishmathi Institute of Technology & Science, Karimnagar, Telangana.

ABSTRACT-Group-level methods have been widely used in applications to segment and manipulate the image. Because the re-initialization process can cause serious problems, and can affect numerical accuracy, a new type of system is proposed without re-initialization, during which a new set of levels can be preserved during the development of the level group. Various experiments show that this method is more powerful in configuration and faster and more accurate also compared to the old model known well. The evolution of the level group can be described as a gradient flow that reduces the energy function with the term regulation of distance and external energy that can drive the zero-level movement specified towards the desired positions. This can lead to a new type of development that can be useful to maintain the desired shape of the level group function essentially near the zero-level group, which can be called the DRLSE development. This helps eliminate the use of re-initialization and can be used to reduce errors. The main feature of the set-level model is that one can easily make digital calculations involving curves and surfaces without the possibility of specifying the parameters of objects. Now, how to adjust the level is an important way to split the image. In order to analyze the medical image, it must first be divided into different parts using an image fragmentation process that can only be DRLSE, which can reduce undesirable side effects. Thus, this paper provides a simple application for active contour method using level groups.

Keywords: Image segmentation, DRLSE, Canny edge detection.

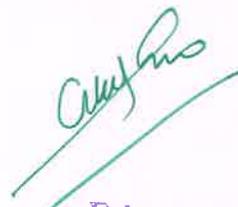
1. INTRODUCTION

Level-set methods (LSM) are a conceptually frameworks for using level sets as appliance for the numerical inquiry of different shapes and surfaces. Also, the process of level-set method results which can be very easy to follow shapes that can change the configuration, for example, when a shape is splitted in two develops holes, or the reverse of these operations. Image segmentation is a process which is based on two properties- similarities and dissimilarities in the intensity inside image. Some key ideas in case of the levelset method were also proposed earlier by Dervieux and Thomasset [1], [2] in the late 1970s, but their work did not draw much attention to the study, it was only after the work by Osher and Sethian in [3], the level set method became a well-known method. All these processes make the level-set method a greater gadget for creating the time-varying objects, like enlargement of an airbag, or an example of oil drop floating in the water.

Image segmentation is a process which is complex in artificial vision and especially in medical imaging applications because of the importance on the accuracy of results which can provide the information about the complex structure of human body organs. Explicit deformable models or active contours are used in image processing and also mostly used in medical imaging. In the applications of processing of an image and computer vision, the level-set method was introduced independently by Caselles et al. [4] and Malladi et al. [5] in the context of active contour. It will emphasize not only what had been done in the image science applications using these level set techniques, but also in the other area of sciences where the level set methods can be applied without fail. The main idea is to point out the related formulations and solution methods to the image science communities. These communities may include computer vision, image/video processing, and graphics. These are very diverse, with some specialties such as Hollywood type special effects and medical imaging. In recent years a major number of algorithms have been proposed and also different approaches have been adopted in image segmentation

Number of research papers per teacher in the Journals notified on UGC website during 2017-18

1	Comparison between Two CPW-FED UWB Antennas based on different feeding techniques	Dr. SAMIRAN CHATTERJEE and Narmala Raju	ECE	International Journal of Research	2017-18	ISSN : 2348-6848 (Online) 2348-795X (Print)	https://www.ugc.ac.in/pdfnews/5283580_UC-Cancelled-List.pdf
2	Design of 2-element Ultra Wide Band array antenna for satellite and radar communication	Dr. SAMIRAN CHATTERJEE and Narmala Raju	ECE	International Journal of Research	2017-18	ISSN : 2348-6848 (Online) 2348-795X (Print)	https://www.ugc.ac.in/pdfnews/5283580_UC-Cancelled-List.pdf
3	Design of single feed microstrip antenna for long distance radio telecommunications with size reduction of 45.70%	Dr. SAMIRAN CHATTERJEE and Narmala Raju	ECE	International Journal of Research	2017-18	ISSN : 2348-6848 (Online) 2348-795X (Print)	https://www.ugc.ac.in/pdfnews/5283580_UC-Cancelled-List.pdf
4	The combined effect of multiwalled carbon nanotubes and exhaust gas recirculation on the performance and emission characteristics of a diesel engine	Dr. G. Lakshmi Narayana Rao	MECH	International Journal of Ambient Energy	2017-18	0143-0750	https://www.scopus.com/sourceid/26672
5	Optimization of DI diesel engine parameters fueled with iso-butanol / diesel blends – Response surface methodology approach	Dr. G. Lakshmi Narayana Rao	MECH	ELSEVIER-FUEL	2017-18	0022-314X	https://www.scopus.com/sourceid/16313


Principal
 Jyothishmathi Institute of
 Technology & Science
 Karimnagar.



Comparison between Two CPW-FED UWB Antennas based on different feeding techniques

Ch. Sushma^{#1}, P. Sreeja^{#2}, Narmala Raju^{#3}, Samiran Chatterjee^{#4}

^{1,2}Student, ECE Department, Jyothishmathi Institute of Technology and Science, Affiliated by JNTUH, Nusthulapur, Karimnagar

^{3,4}Associate Professor, ECE Department, Jyothishmathi Institute of Technology and Science, Affiliated by JNTUH, Nusthulapur, Karimnagar

¹sushma.chirram@gmail.com

²sreejaperumboodurl2@gmail.com

³narmalaraju@gmail.com

⁴samiranengineer@gmail.com

Abstract— Design and analysis of a compact Ultra Wideband (UWB) slot antenna is presented in this paper. The antenna consists of a combination of rectangular and Y- shaped slot. The CPW feed is designed for 50Ω impedance. The characteristics of the designed structure are investigated by using MoM based electromagnetic solver, IE3D. The antenna was fabricated with CPW feed and transmission line feed. But after the extensive analysis of antenna with different feed, it is found that the antenna gives the better performance for Transmission line feed. For apply a CPW feed we get a bandwidth of about 812.75 MHz whereas for transmission line feed we achieve a UWB bandwidth of about 10 GHz approximately. But for transmission line feed, when the feeds are act as a parasitic element then we don't achieve a good result but when all the ports are active we achieve a UWB bandwidth. The simple configuration and low profile nature of the proposed antenna leads to easy fabrication that may be built for any wireless UWB device applications.

Keywords— Transmission line feed, Compact, CPW, UWB, Impedance.

I. INTRODUCTION

UWB is a short range unlicensed wireless communication system which has a potential to offer high capacity with low power compared with the contemporary wireless systems for short range applications. After the release of UWB for unlicensed application by the Federal Communications Commission (FCC), it receives much much lower than the resonant frequency of the conventional printed antenna with the same patch area. Attention by researchers due to its inherent properties of low power consumption, high data rate and simple configuration [1]. With the rapid developments of UWB

systems, a lot of attention is being given to designing the UWB antennas. The design of antennas for UWB applications must satisfy the following requirements. They are ultra wide impedance bandwidth, omni-directional radiation pattern, constant gain high radiation efficiency, constant group delay, low profile and easy manufacturing [2]. Interestingly the planar slot antennas with CPW fed posses the features mentioned above with simple structure, less radiation loss, less dispersion and easy integration of monolithic microwave integrated circuits (MMIC)[3]. Hence, the CPW fed planar slot antennas [4-10] are identified as the most promising antenna design for wide-band wireless applications. In planar slot antennas, the slot width and feed structure affect the impedance bandwidth of the antenna. The wider slot gives more bandwidth, and the optimum feed structure gives good impedance matching [11-18]. The CPW feed line with various possible patch shapes available in the literature such as 'T', cross, fork like, volcano and square are used to give wideband width [19-33]. The simulation software used for this analysis is IE3D [34]. The paper is organized as follows: Section 2: brings out the geometry of the antenna. In Section 3, simulation results and analysis are discussed. Section 4: concludes the paper.

II. ANTENNA DESIGN

The structure of the proposed antenna 1 is shown in Fig.1. Also the structure of proposed antenna 2 is shown in fig. 2. In this study, a dielectric substance (FR4) with thickness of 1.6mm and a relative permittivity of 4.4 is chosen as substrate. The CPW feed is designed for 50 Ω characteristic impedance. Both the antenna structures are same but the only difference is that there is a change in feeding techniques. In proposed antenna 1 we use a

Design of 2-element Ultra Wide Band array antenna for satellite and radar communication

P.Samanth^{#1}, V.Sai Chandu^{#2}, Narmala Raju^{*3}, S.Chatterjee^{*4}

^{#1,2} Student, ECE Department, Jyothishmathi Institute of Technology and Science, Affiliated by JNTUH, Nusthulapur, Karimnagar

^{3,4} Associate Professor, ECE Department, Jyothishmathi Institute of Technology and Science, Affiliated by JNTUH, Nusthulapur, Karimnagar

¹samanth.pulluri@gmail.com

²chandu.veldandi@outlook.com

³narmalaraju@gmail.com

⁴samiranengineer@gmail.com

Abstract— A single layer, dual co-axial feed microstrip array antenna is proposed for the above mentioned communication purposes. We achieve array antenna with a low gain and high -3db beam-width for the application for which it is intended. The magnitude for the above application is very high means it will work in the good manner i.e. there will be no inter symbol interference for the application for which it is intended. The maximum resonance is 99.75Ω at 0.81 GHz and average resonance is 84.75Ω . The minimum resonance gets at 3.83 GHz with 1Ω resonance. We achieve the maximum return loss of about -97.25 dB and minimum return loss of about -27.5 dB with the bandwidth of 10 GHz. Finally we achieve the -3 dB beam-width of about 156.31° with absolute gain of -9.57 dBi.

Keywords— Layer, Feed, Resonance, Absolute Gain, Return Loss

I. INTRODUCTION

For new era of communication, design of compact microstrip antenna creates a lot of interest among the young engineers especially for microwaves engineer [1]. For the portability of microwave devices, we need small, light weight and compact antenna and on this ground Compact Microstrip Antenna is the most suitable device. The two operating frequencies are required mainly because most of the microwaves and wireless engineers use different communication bands and for uses of different bands different frequencies are used by the engineers. Therefore recently the engineers design antennas which has multiband characteristics. Another criteria needed to design the antenna is size reduction which is the new technique and in this method the size of the antenna is same for conventional as well as proposed antenna. For size reduction the most useful technique is to cut different structures in the proper position on the conventional microstrip antenna. Reducing the size of the antenna means the resonant frequency of slotted antenna is drastically reduced compared to conventional antenna [2-7]. There are so many antennas are used to reduce the size of

proposed antenna like DRA (Dielectric Resonator Antenna), Fractal Antenna etc [8-10]. But the above mentioned antennas are very difficult to design compared to microstrip patch antenna. Now the structure of Fractal antennas are just like a Euclidean geometry structure and it is a combination of triangle, square and circles etc. So Fractal antennas are very much difficult to design and DRA requires high dielectric constant substrates (more than 20) which are not readily available [11-14]. Now a day's the size of the compact microstrip antenna is very small and miniaturization is possible so these antennas are increasing the demand of their application in various communications especially microwave and mobile communication. For size reduction of the antenna, we need dielectric constant with high values. The simulation has been carried out by IE3D [15] software which uses the MOM method and verified by measurements. This is applicable to C-Band microwave frequency band ranges from 4-8 GHz.

II. ANTENNA DESIGN

The configuration of the array antenna is shown in Figure 1 substrate (PTFE) thickness $h=1.6$ mm, dielectric constant $\epsilon_r=4.4$. Coaxial probe-feed (radius=0.5mm) is applied for getting the better result.

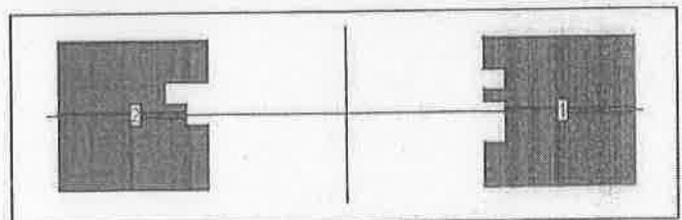


Figure 1: Two element array antenna

III. RESULTS AND DISCUSSION

Simulated (using IE3D [15]) results of return loss in array antenna structures are shown in Figure 2.

Design of single feed microstrip antenna for long distance radio telecommunications with size reduction of 45.70%

Venu Charan Rao Nadipally^{#1}, Vamshi Krishna Kasarla^{#2}, Narmala Raju^{*3}, Samiran Chatterjee^{*4}

^{1,2}Student, ECE Department, Jyothishmathi Institute of Technology and Science, Affiliated by JNTUH, Nusthulapur, Karimnagar

^{3,4}Associate Professor, ECE Department, Jyothishmathi Institute of Technology and Science, Affiliated by JNTUH, Nusthulapur, Karimnagar

^{#1}venucharan@hotmail.com

^{#2}kasarlavamshikrishna2597@gmail.com

^{*3}narmalaraju@gmail.com

^{*4}samiranengineer@gmail.com

Abstract— We are designing a single layer single feed microstrip antenna with an increased frequency ratio. We change the different feed locations for getting the better results. First, we apply feed for (2, 2.5) location. But we are getting the resonant frequency at 8.97 GHz which is more than the conventional antenna structure. So, we change our feed location from (2, 2.5) to (1, -1) position and we achieve the resonant frequency at 5.35 GHz and we also achieve some multiple frequency. Here we use the PTFE substrate with dielectric constant of 4.4. We also achieve an increased frequency ratio of about 10% with absolute gain of 4 dBi (gain of isotropic antenna) and we are able to get -3 dB beam-width of about 170.32° which is a broad beam for the application which is intended. We also achieve lower VSWR for this paper.

Keywords— Isotropic Antenna, PTFE, Frequency Ratio, Resonant Frequency, Frequency ratio

I. INTRODUCTION

For new era of communication, design of compact microstrip antenna creates a lot of interest among the young engineers especially for microwaves engineer [1]. For the portability of microwave devices, we need small, light weight and compact antenna and on this ground Compact Microstrip Antenna is the most suitable device. For microwave communication as well as also for the wireless communication, now a day's more than one operating frequency is required due to many reasons. The two operating frequencies are required mainly because most of the microwaves and wireless engineers use different communication bands and for uses of different bands different frequencies are used by the engineers. Therefore recently the engineers design antennas which has multiband characteristics. Another criteria needed to design the antenna is size reduction which is the new technique and in this method the size of the antenna is same for conventional as well as proposed antenna. For size reduction the most useful technique is to cut different structures in the proper position on the conventional microstrip antenna [2-5]. Reducing the size of the antenna means the resonant frequency of slotted antenna is drastically reduced compared to conventional antenna [6-8]. There are so many antennas are used to reduce the size of proposed antenna like DRA (Dielectric Resonator Antenna),

Fractal Antenna etc [15-20]. But the above mentioned antennas are very difficult to design compared to microstrip patch antenna. Now the structure of Fractal antennas are just like a euclidean geometry structure and it is a combination of triangle, square and circles etc. So Fractal antennas are very much difficult to design and DRA requires high dielectric constant substrates (more than 20) which are not readily available. Now a day's the size of the compact microstrip antenna is very small and miniaturization is possible so these antennas are increasing the demand of their application in various communications especially microwave and mobile communication [9-10]. In this paper two bevels are cut at the left-top corner and the right-bottom corner to increase the return loss and gain bandwidth performance. It also gives the increased frequency ratio for the proposed compact microstrip printed Antenna. For size reduction of the antenna, we need dielectric constant with high values [11-14]. Our aim is to design the antenna with multiband operation and increased frequency ratio as well as increase the operating bandwidth. The simulation has been carried out by IE3D [21] software which uses the MOM method.

II. ANTENNA DESIGN

The configuration of the conventional printed antenna is shown in Figure 1 with L=10 mm, W=10 mm, substrate (PTFE) thickness h= 1.6 mm, dielectric constant $\epsilon_r = 4.4$. Coaxial probe-feed (radius=0.5mm) is located at W/2 and L/3.

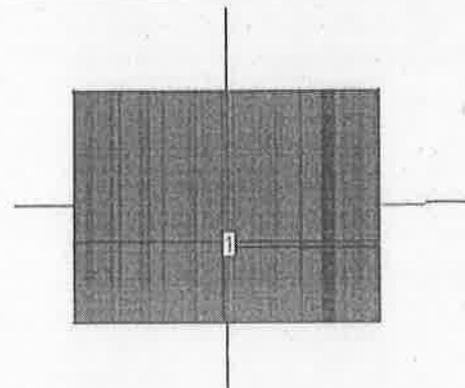


Figure1: Conventional Antenna Structure

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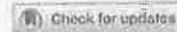
Original Articles

The combined effect of multiwalled carbon nanotubes and exhaust gas recirculation on the performance and emission characteristics of a diesel engine

Anchupogu Praveen , G. Lakshmi Narayana Rao & B. Balakrishna

Received 29 Jul 2017, Accepted 10 Dec 2017, Accepted author version posted online: 10 Jan 2018, Published online: 01 Feb 2018

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ABSTRACT

The present experimental investigation focuses on the combined effects of multiwalled carbon nanotubes (MWCNTs) and exhaust gas recirculation (EGR) of a diesel engine fuelled with *Calophyllum inophyllum* biodiesel blends. The *C. inophyllum* biodiesel-diesel blend was prepared in a proportion of 20% biodiesel and 80% diesel (B20) by a volumetric basis with a magnetic stirrer. The MWCNTs (in the mass fraction of 40 ppm) were dispersed into the B20 fuel with the help of an ultrasonicator. The results show that brake thermal efficiency increases by 7.6% with the addition of MWCNTs to the B20 fuel, decreases by 2.42% with the EGR to the B20 fuel, and increases by 2.26% with the addition of MWCNTs and EGR to the B20 fuel compared to the B20 fuel. The maximum cylinder pressure and heat release rate was occurred as 67.35 bar and 74.80 kJ/m³ deg for the B20MWCNT40 fuel at full load condition. The CO



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Full Length Article

Optimization of DI diesel engine parameters fueled with iso-butanol/diesel blends – Response surface methodology approach



S. Saravanan^{a,*}, B. Rajesh Kumar^{b,c}, A. Varadharajan^a, D. Rana^d, Balaji Sethuramasamyraja^e, G. Lakshmi Narayana rao^a

^a Department of Mechanical Engineering, Sri Venkateswara College of Engineering, Chennai, TN, India

^b Research Centre, Department of Mechanical Engineering, Sri Venkateswara College of Engineering, Chennai, TN, India

^c IC Engines Division, Department of Mechanical Engineering, Jeppiaar Institute of Technology, Chennai, TN, India

^d Department of Chemical and Biological Engineering, University of Ottawa, Ottawa, Ontario K1N 6N5, Canada

^e Jordan College Of Agricultural Sciences & Technology, California State University, Fresno, CA 93740-8002, USA

HIGHLIGHTS

- Minimizing smoke and NOx emissions simultaneously with maximum BTE and minimum BSFC.
- Optimum combination of factors with highest desirability is (0.969).
- Validation of the models developed using RSM.
- Effect of the injection pressure, injection timing and EGR on performance and emissions for all blends.

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ABSTRACT

Iso-butanol is a naturally occurring 4-carbon alcohol that can be obtained by processing organic crops like corn and sugarcane. An experimental and statistical investigation is carried out to analyze the effects of injection-pressure, timing and exhaust gas recirculation (EGR) on performance and emissions of a DI diesel engine fuelled with 40% by vol. of iso-butanol/diesel blend. Response surface methodology was used to model all measured responses like nitrogen oxides (NOx), smoke opacity, brake thermal efficiency (BTE) and brake specific fuel consumption (BSFC). Analysis of variance (ANOVA) revealed that all developed models were statistically significant. Interactive effects between injection pressure, injection timing and EGR for all blends were analyzed using response surface plots that were plotted using developed regression models. Optimization was performed using desirability approach of the RSM with an objective to minimize NOx and smoke emissions simultaneously with maximum BTE and minimum BSFC. Iso-butanol/diesel blend injected at 240bar pressure, 23°C CA BTDC under 30% EGR was predicted to be optimum for this particular engine. The predicted combination was validated by confirmatory tests and the error in prediction was found to be within 4%.

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1. Introduction

Diesel engines are popular energy conversion devices because of their higher thermal efficiency, higher torque capability and higher durability when compared to gasoline engines [1]. High NOx and PM emissions remain as main obstacles in the research and development of next generation diesel engines [2]. NOx causes smog [3], ground-level ozone [4] and acid rain [5]. Smoke is carcinogenic [6,7] and its continuous exposure can cause various diseases to human [8–12]. To address these issues, diesel engine

researchers attempt to reduce emissions often by modifying engine design parameters and using after-treatment devices.

EGR and retarded injection timing were often used to suppress NOx formation [13]. Using EGR reduces peak combustion temperatures in the combustion chamber which encourages NOx formation and controls the combustion phasing [14]. Retarding the injection timing also lengthens the ignition delay and could result in further reduction of NOx emissions with a slight penalty in smoke and fuel consumption [15,16]. Diesel reformulation with biofuels is a popular option among researchers because it is a practical approach that requires few modifications to the existing engine layout. Adding biofuels to fossil diesel increases the renewable fraction in the cylinder and improves energy security. Further

* Corresponding author.

E-mail address: idhayapriyan@yahoo.co.in (S. Saravanan).

Number of research papers per teacher in the Journals notified on UGC website during 2016-17

1	Hybrid Approach for Prediction of Cardiovascular Disease Using Class Association Rules and MLP	Srinivas K	CSE	International Journal of Electrical and Computer Engineering	2016-17	2088-8708	https://www.scopus.com/sourceid/21100373959
2	Development of IoT Controlled Agri-Rover for Automatic Seeding	Prabaharan S	CSE	International Journal of Pure and Applied Mathematics	2016-17	1314-3395	https://www.scopus.com/sourceid/19700182690
3	Earlier Detection of Cancer Regions from MR Image Features and SVM Classifiers	Dr. G.Karthick	ECE	International journal of imaging systems and technology	2016-17	Online ISSN:1098-1098	https://www.scopus.com/sourceid/35932
4	A NOVEL GENERALIZED TOPOLOGY FOR MULTI-LEVEL INVERTER WITH SWITCHED SERIES-PARALLEL DC SOURCES	G. SRIDHAR	EEE	IJECS	2016-17	ISSN: 2502-4752	https://www.scopus.com/sourceid/21100799500
5	Design and Analysis of an Automobile Exhaust Muffler	Dr. G. Lakshmi Narayana Rao	MECH	Industrial and Systems Engineering	2016-17	1748-5037	https://www.scopus.com/sourceid/5800179616
6	Review on Research Tool Condition Monitoring and Machining Processes in Turning	Dr. G. Lakshmi Narayana Rao	MECH	Industrial and Systems Engineering	2016-17	1748-5037	https://www.scopus.com/sourceid/5800179616


Principal
 Jyothimathi Institute of
 Technology & Science
 Karimnagar.



Hybrid Approach for Prediction of Cardiovascular Disease Using Class Association Rules and MLP

K. Srinivas¹, B. Ramasubba Reddy², B. Kavitha Rani¹, Ravindar Mogili³

¹ Professor, Jyothishmathi Institute of Technology & Science, Karimnagar, TS, India

² Professor, SVEC, Tirupati, AP, India

³ Associate Professor, Jyothishmathi Institute of Technology & Science, Karimnagar, TS, India

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ABSTRACT

In data mining classification techniques are used to predict group membership for data instances. These techniques are capable of processing a wider variety of data and the output can be easily interpreted. The aim of any classification algorithm is the design and conception of a standard model with reference to the given input. The model thus generated may be deployed to classify new examples or enable a better comprehension of available data. Medical data classification is the process of transforming descriptions of medical diagnoses and procedures used to find hidden information. Two experiments are performed to identify the prediction accuracy of Cardiovascular Disease (CVD). A hybrid approach for classification is proposed in this paper by combining the results of the associate classifier and artificial neural networks (MLP). The first experiment is performed using associative classifier to identify the key attributes which contribute more towards the decision by taking the 13 independent attributes as input. Subsequently classification using Multi Layer Perceptrons (MLP) also performed to generate the accuracy of prediction using all attributes. In the second experiment, identified key attributes using associative classifier are used as inputs for the feed forward neural networks for predicting the presence or absence of CVD.

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Corresponding Author:

1. INTRODUCTION

With the ever-growing complexity in recent years, huge amounts of information in the area of medicine have been saved every day in different electronic forms such as Electronic Health Records (EHRs) and registers which is used for different purposes. Cardiovascular disease (heart disease) [1]-[3] referred as CVD is the class of diseases that involve the heart or blood vessels. It is essential to evaluate the presence or absence of cardiovascular disease (CVD) risk. Several methods are discussed by researchers to improve cardiovascular risk prediction. The data of the patients collected from different sources is stored in registers and mainly used for monitoring and analyzing health conditions. The existence of accurate epidemiological registers a basic prerequisite for monitoring and analyzing health and social conditions in the population. They are frequently used for research, evaluation, planning and other purposes by a variety of users in terms of analyzing and predicting the health status of individuals.

Data Mining aims at discovering knowledge out of data and presenting it in a form that is easily compressible to humans. It is a process that is developed to examine large amounts of data routinely collected. Data mining is most useful in an exploratory analysis scenario in which there are no predetermined

Development of IoT Controlled Agri-Rover for Automatic Seeding

Aditya Vishwas Kanade¹, Arockia Selvakumar A^{2*}, Dnyanesh Jalamkar³

School of Mechanical and Building Sciences,

VIT University, Chennai, India

^{2*}arockia.selvakumar@vit.ac.in

Prabaharan Sengodan⁴, Yousef Hasan F. Jbara⁵

Computer Sciences,

College of Engineering and Information Technology, Buraydah Private Colleges

Kingdom of Saudi Arabia

Abstract

Objective: The field of robotics can be modified with the combination of number of approaches such as, mechanical approach, software technology and electronic control system approach together. In the period of current globalization, scientists are trying to apprise advancements based on robotics which operates and performs tasks very effectively, efficiently and in lesser time. These progressions can be utilized to improve Indian traditional approach of farming. Since in Indian scenario, near about 70% population is reliant on agriculture. So the agricultural field in India should be improved to increase the yield. Agree rover is the best solution to meet the rising demand on quantity and quality of agriculture products and declining labor availability in rural farming areas. The main aim of the designed system is efficient utilization of resources and to reduce a laborious work.

Method: The seed sowing operation is performed by the system using servomotor mechanism controlled by ARDUINO controller and robot motion is controlled by Internet of Things (IoT). The necessities for small scale seeding machines are, the system should be suitable for small field, simple in design and technology and ease of handling.

Findings: The developed Agri-Rover satisfies all those parameters also reduce the human interference. Also increased speed of seed sowing, seed placement precisions made it usable.

Improvement: Agri-Rover made of tough yet less cost material which made it low-cost for the small scale farmers.

Keywords and Phrases: Internet of Things; Blynk; ARDUINO controller; Agri-Rover; Seed sowing system;

Earlier Detection of Cancer Regions from MR Image Features and SVM Classifiers

Harikumar Rajaguru,¹ Karthick Ganesan,² Vinoth Kumar Bojan³

¹ ECE Department, Bannari Amman Institute of Technology, Sathyamangalam, Tamil Nadu, India

² Research Scholar, K.S.R. College of Engineering, Tiruchengode, Tamil Nadu, India

³ EEE Department, Dr. Mahalingam College of Engineering and Technology, Pollachi, Tamil Nadu, India

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ABSTRACT: In this article, we examine the use of several segmentation algorithms for medical image classification. This work detects the cancer region from magnetic resonance (MR) images in earlier stage. This is accomplished in three stages. In first stage, four kinds of region-based segmentation techniques are used such as *K*-means clustering algorithm, expectation-maximization algorithm, partial swarm optimization algorithm, and fuzzy *c*-means algorithm. In second stage, 18 texture features are extracting using gray level co-occurrence matrix (GLCM). In stage three, classification is based on multi-class support vector machine (SVM) classifier. Finally, the performance analysis of SVM classifier is analyzed using the four types of segmentation algorithm for a group of 200 patients (32—Glioma, 32—Meningioma, 44—Metastasis, 8—Astrocytoma, 72—Normal). The experimental results indicate that EM is an efficient segmentation method with 100% accuracy. In SVM, quadratic and RBF ($\sigma = 0.5$) kernel methods provide the highest classification accuracy compared to all other SVM kernel methods. © 2016 Wiley Periodicals, Inc. *Int J Imaging Syst Technol*, 26, 196–208, 2016; Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/ima.22177

Key words: MR images; segmentation; texture features; SVM

I. INTRODUCTION

Nowadays, medical image processing is used in human anatomy for clinical research, diagnosis, and treatment. In this work, we have considered MR images for earlier detection of cancer region. The two important steps in medical image classification are segmentation and feature extraction. In the view of classification of medical image, the first hurdle occurs is the selection of the appropriate segmentation algorithm. The second difficulty arises during extraction of features in an image. Selection of appropriate segmentation algorithm plays a major role in classification. Partitioning of an image into several sub-image components is called image segmentation. Segmentation is an

important part of image recognition, compression, and classification. For accurate image segmentation, some good features have to be extracted.

Segmentation algorithm is classified into three types namely edge-based segmentation, threshold-based segmentation, and region-based segmentation. In this article, we prefer region-based segmentation algorithm. After segmentation, for extracting features so many techniques are available but we choose Gray level co-occurrences matrix (GLCM) to extract the features. Normally people extract maximum of 12 textures GLCM features. To enhance the accuracy of classifier 18 textures GLCM features have been extracted. Having completed GLCM feature extraction process, classification is to be done. Now SVM multi-class classifier is used to classify the different classes of MR images. SVMs are nowadays one of the most successful tools in machine learning.

Figure 1 represents outline of the classification for medical images using different segmentation algorithms. Each image in the dataset would undergo the preprocessing stage and then segmentation is done by different types of segmentation algorithms. Those segmented image features are extracted using GLCM technique. Extracted features are given as input to the SVM classifier and so many kernel methods are available in SVM classifier but we are Applying four kernel methods namely RBF, Linear, Quadratic and Polynomial. Finally classified images are labeled. Figure 2a shows the original MR image which has been used for analyzing the segmentation algorithms.

A. Review. A number of techniques such as artificial neural networks, genetic algorithm, SVM, least squares SVM, fuzzy SVM, learning vector quantization (LVQ), and *K*-nearest neighbor (KNN) have been used in the MR image classification. El-Dahshan et al. proposed a work that consists of hybrid technique for MRI brain image classification. Here discrete wavelet transform coefficients are used for classification (El-Dahshan et al., 2009). They used SVM with RBF kernel and SVM with linear kernel for classification and

Correspondence to: G. Karthick; e-mail: karthick.sgs@gmail.com



A Novel Generalized Topology for Multi-level Inverter with Switched Series-parallel DC Sources

G. Sridhar^{a*}, P. SatishKumar^b, M. Sushama^c

^a Department of Electrical & Electronics Engineering, Jyothimathi Institute of Technology and Science, Karimnagar, Telangana, India

^b Electrical Engineering Department, Osmania University, Hyderabad, Telangana, India

^c Department of Electrical and Electronics Engineering, JNTUH, Hyderabad, Telangana, India

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ABSTRACT

This paper presents a novel topology of single-phase multilevel inverter for low and high power applications. It consists of polarity (Level) generation circuit and H Bridge. The proposed topology can produce higher output voltage levels by connecting DC voltage sources in series and parallel. The proposed topology utilizes minimum number of power electronic devices which helps in reduction of the cost, size, and weight. The proposed topology consumes low power therefore improves the efficiency of the converter. Switching pulses are generated using Phase disposition (PD) pulse width modulation technique. Finally the effectiveness of the proposed topology is verified using MATLAB/SIMULINK software tool. 7level asymmetrical multilevel inverter prototype hardware is prepared to support the proposed topology to verify the effectiveness and its validity.

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NOMENCLATURE

V_o	Output Voltage	$V_{d_{m,i}}$	i^{th} cell m^{th} DC voltage source
V_{dc1}, V_{dc2}	Voltage connected to each cell	N_{level}	Number of output voltage levels
V_{dcn}	Voltage connected to n^{th} cell	N_{IGBT}	Total number of IGBTs
m	Number of separate DC voltage source	V_{omax}	Maximum output voltage
N_{step}	Number of output voltage steps		

1. INTRODUCTION

Introduction of the multilevel inverters was done in 1975 and initiated with three level inverter [1]. Many sources of DC voltage are synthesized to obtain a staircase identical to sinusoidal output voltage waveform. In recent years MLI is gaining much fame in the field of DC/AC conversion due to less THD, better power quality and good electromagnetic compatibility.

Even after having many merits MLI has few demerits that is to maximize output voltage levels semiconductor switch requirements with peripheral devices like protection circuits, gate driver circuits used extensively. Due to more device count the overall

system becomes expensive, stupendous and complicated and minimizes the quality and competency of the converter [2].

MLI are grouped into Cascaded H Bridge, Flying capacitor and Neutral point Clamped traditionally. Cascaded H Bridge is popular due its coherence and easy operation but the limitation of the topology is requirement of isolated DC power supplies [3]. CHB is arranged as asymmetric and symmetric configuration based on magnitude of the DC voltage sources if $V_{dc1} \neq V_{dc2} \neq V_{dc3}$ is asymmetric vice versa. For the same number of power switches the asymmetric configuration of CHB generates more number of voltage levels as compared with symmetric configuration.

The requirement of large number of bidirectional switches is a major issue in asymmetrical topologies. An effort has been attempted to reduce bidirectional

*Corresponding Author's Email: gaddamsridhar78@gmail.com (G. Sridhar)

Design and Analysis of an Automobile Exhaust Muffler

P. Srinivas*, Venkata Ramesh Mamilla, G. Lakshmi Narayana Rao, Sowdager Moin Ahmed

Department of Mechanical Engineering, QIS Institute of Technology, Ongole, Andhra Pradesh, India

Abstract

Present day engines are required to have more engine power and are also required to meet the strict pollution standards. In an automobile the exhaust muffler plays an integral role in reducing the sound of the automobile, as well as the ride itself. In order to maintain a desired noise and comfortable ride, the modes of a muffler need to be analysed. Here dynamic modal analyses were carried out to determine the mode shapes, stresses and deformations of exhaust muffler using CAE analysis.

Keywords

Design, Analysis, Automobile, Exhaust Muffler

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1. Introduction

Mufflers are installed within the exhaust system of most internal combustion engines, although the muffler is not designed to serve any primary exhaust function. The muffler is engineered as an acoustic sound proofing device designed to reduce the loudness of the sound pressure created by the engine by way of acoustic quieting.

For the majority of such systems, however, the general rule of "more power, more noise" applies. Several such exhaust systems that utilize various designs and construction methods:

- Vector muffler - for larger diesel trucks, uses many concentric cones, or for performance automotive applications, using angled baffles to cause exhaust impulses to cancel each other out.
- Spiral baffle muffler - for regular cars, uses a spiral-shaped baffle system
- Aero turbine muffler - creates partial vacuums at carefully spaced out time intervals to create negative back pressure,

effectively 'sucking' the exhaust out of the combustion cylinder.

2. Literature Review

Although the first works on this subject are more than 10 years old, the study of heat transfer in automotive exhaust systems has only recently attracted the importance it deserves due to its key role in the design of modern exhaust after-treatment systems. Such studies are today important for better understanding of these systems and, thus, being able to influence under body heat transfer, transient cold-start warm-up of the catalytic converter, thermal ageing of the converter, or the regeneration behaviour of diesel particulate traps etc.

Experimental investigation of the heat transfer rates in exhaust ports was initially aimed at supporting thermodynamic engine cycle models, especially for engine turbocharger matching applications [6]. Those experimental findings were exploited in the computer model developed by Frank [7], who also simulated manifold heat transfer by employing classical correlations applicable to curved pipes. Meitner and Sorenson [8], on the other hand, based on the

* Corresponding author

E-mail address: srinivas.pamitipati@gmail.com (P. Srinivas), mno_ram@yahoo.co.in (V. R. Mamilla), glrao_68@yahoo.co.in (G. L. N. Rao)

Review on Research Tool Condition Monitoring and Machining Processes in Turning

Mandhadi Anusha*, Venkata Ramesh Mamilla, G. Lakshmi Narayana Rao

Department of Mechanical Engineering, IS Institute of Technology, Ongole, Andhra Pradesh, India

Abstract

Conventional machining systems rely heavily on human operators for monitoring the process, taking the appropriate action in the event of a problem, inspecting the quality of the product, controlling the process and material handling. However, in recent years, manufacturing industry has been moving towards automated, un-manned machining to improve productivity and reliability. Thus, the implementation of an intelligent machining system, which can perform specified machining operations without detailed input from human operators in a harsh and unpredictable shop environment, has become increasingly important. This paper concerns an aspect of this general problem, namely the adaptability of a tool wear monitoring system under relatively minor changes in cutting conditions.

Keywords

Review, Tool Life, Wear, Turning Process

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1. Introduction

Computer integrated manufacturing (CIM) systems have emerged in response to the requirements of greater flexibility, productivity, high precision and quality of the product. The need to improve the quality and decrease the scrap rate while increasing the production rate is forcing industry to consider untended machining as a viable alternative. But this leads the operator, who attempts to sense the effect of process variables and adjust the conditions accordingly, misguided in the many cases. Also some times the operator is incapable of responding fast to alter the conditions of operation accordingly. The former leads to high scrap rate and higher cost with the need for rework. The later leads to reduced productivity. Therefore appropriate sensors and associated monitors are, therefore, the key to successful implementation of an untended machining process.

Online monitoring methodology of a machining process is the key success of an untended machining process. The monitoring systems should be highly reliable, in order to

leave the intelligent human operator out of manufacturing loop. The methodology to develop a monitoring system involves several key issues, like tool wear model, on-line signal processing, on-line signal detection, digital signal processing and model based controller. The model based controller serves as a link between the machining process and the detected signals from the sensors. For successful on-line monitoring, various sensors have been evaluated. These include, among others, sensors based on force, torque, power, vibration, deflection, acoustic emission and radioactivity. Though these sensors are successful in manufacturing shop floor, the need is felt more than ever if we were to be successful in implementing an untended manufacturing efficiently. In some machining operations, it is the lack of system's process monitoring that is preventing total automation. The assurance of the total product quality and the minimization of the manufacturing cost call for the use of non destructive, in-process sensing techniques to characterize, not only geometric dimensions, shape and size, but also the microstructure, internal defects, and material properties of the part. The availability of product quality

* Corresponding author

E-mail address: mandhadi.anusha15@gmail.com (M. Anusha), maa_rm@ynhoo.co.in (V. R. Mamilla), glnrao_68@yahoo.co.in (G. L. N. Rao)

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3	Biodiesel Production from Waste Cooking Oil by Alkali Catalysed Transesterification Process	Dr. G. Lakshmi Narayana Rao	MECH	International Journal of Applied Engineering Research	2015-16	0973-4562	https://www.scopus.com/sourceid/21100217234


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R. Lalu Naik & P. Chenna Reddy

Quantum Information Processing

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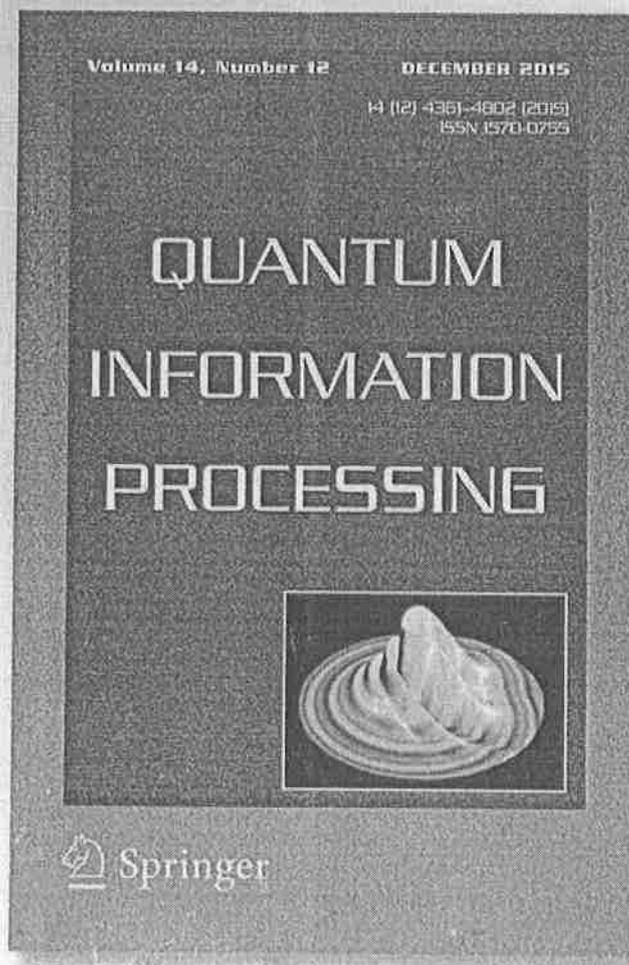
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A review: Waste lubricating oil as an alternative fuel blended with diesel

¹ Dr. Venkata Ramesh Mamilla, ² Dr. Lakshmi Narayana Rao G

¹ Professor & HOD, Department of Mechanical Engineering, QIS Institute of Technology, Ongole, Andhra Pradesh, India.

² Professor & Principal, Department of Mechanical Engineering, QIS Institute of Technology, Ongole, Andhra Pradesh, India.

Abstract

This paper discusses about waste lubrication oil as a fuel for diesel engines with various microwave pyrolysis applications in waste to energy engineering from various researchers. Conversion of waste lubrication oil into useful fuel that is diesel like fuel (DLF) in the pyrolysis process.

The objective of this paper is to study on prepare Diesel like fuel from waste lubrication oil and also involve the study of analysis of the performance and emission characteristics of the diesel like fuel and comparing with petroleum diesel from various researchers.

Keywords: Review, Waste Lubricating Oil, Alternative Fuel, Diesel

1. Introduction

1.1 Diesel like Fuel (Recycling Of Waste Lubrication Oil)

The used or waste oils can be refined and treated to produce fuels or lubricating oil base stock. On the other hand, the waste oils pose an environmental hazard due to both their metal content and other contaminants. The high-volume waste oils can be turned into valuable fuel products by refining and treating processes. Converting of the waste oils into diesel and gasoline-like fuels to be used in engines without disposing is very important.

1.2 Waste engine oil

Waste lubricant oils and bio fuels are two important alternative fuel sources proved to be the best substitutes for existing petro fuels, since waste generated oils represent more than 60% of used lubricant oils. Therefore, waste oils are one of the most abundant pollutant residues that are generated nowadays, reaching the value of 24 million metric tonnes per year. In recent years, recycling of the waste lubricant oils and utilizing of the products as fuels have become important topics for researchers. Most of the lubricant oils are generally obtained from petroleum resources. Petroleum-derived base oils currently account for about 97% of the total lubricant production. However, these oils become waste oils harmful for environment after a certain time period. Recycling of the waste lubricant oils by purifying and converting them into fuels is very important in terms of protection of the environment. After waste lubricant oils are converted into fuels, they can be used as fuels in internal combustion engines. In recycling process, waste lubricant oils are exposed to various processes, and then used as fuel or they are converted into various chemicals in order to minimize the harmful effects of these wastes. Millions of tons of used oils are disposed through dumping on the ground or in water, land filling, or nonenergy-recovery. Utilization of the diesel and gasoline-like fuels produced from the waste lubricant oils, and blending of the produced fuels with gasoline or turpentine decrease consumption of petroleum based fuels, protecting environment from toxic and hazardous chemicals. It also saves of foreign exchange, reduces greenhouse gas emissions and enhances regional development

especially in developing countries. Characteristics of any fuel are very important from the point of deciding whether the fuel can be used for desired application or not. Therefore, some characteristics of the produced diesel-like fuel and gasoline-like fuel are shown in Tables 1 and 2, respectively, together with standard values of a diesel and gasoline fuel. The table shows that some of the parameters of density, boiling point, viscosity, flash point and lower heating value are in the standard values of the diesel oil or reasonably close to the standard values. But, sulfur amount is considerably higher than that value. It should be decreased below the value of 50ppm.

Table 1: Comparison of diesel-like fuel obtained from waste lubrication oil and diesel fuel

S. No	Properties	Diesel fuel	Diesel like fuel
1	Density at 15°C (kg/m ³)	820-845	818
2	Viscosity at 40°C (mm ² /s)	2-4.5	3.49
3	Flash point(°C)	>55	59
4	Fire point(°C)	>50	53
5	Low heating value(kJ/kg)	42.700	42.500

Management of waste oils is a growing concern particularly in industrial and urban areas. Generation of waste oils is closely linked with increase in population of automobiles and industries. When additives and foreign substances, such as metal powder, chips and other particles, are mixed with lubricating oil, aging, degrading and failure will likely occur, leading to mechanical fault and degraded performance. In such cases, the oil is replaced to improve the performance. The used, spent or waste oils should be collected and recycled not only to prevent the environment pollution but also to preserve natural resources. The management of waste oils is particularly important because of the large quantities generated globally through transport and Industrial activities. These Waste Oils may have detrimental effect on the environment if not properly handled, treated or disposed. In recent decades a number of innovative treatment technologies have been developed that promise to solve technical, economic and environmental problems associated with used oil recycling for further motivates that 1liter of waste-oil reprocessed as fuel contains

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Biodiesel Production from Waste Cooking Oil by Alkali Catalysed Transesterification Process

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Biodiesel Production from Waste Cooking Oil by Alkali Catalysed Transesterification Process

Venkata Ramesh Mamilla ^a, G. Lakshmi Narayana Rao ^b, K. Vamsi Krishna ^c, M. Vamsi Sai Krishna ^d, B. Venkatesh babu ^c
^a Professor & HOD, ^b Professor & Principal ^c Assistant Professor, ^{d,c} Student

Department of Mechanical Engineering, QIS Institute of Technology, Ongole, Andhra Pradesh, India.

Abstract—The objective is to convert waste cooking oil used for domestic purposes such as cooking oil into biodiesel using an alkali catalysed transesterification process. Biodiesel is gaining more and more importance as an attractive fuel due to the depleting fossil fuel resources. Chemically biodiesel is monoalkyl esters of long chain fatty acids derived from renewable feed stock like vegetable oils and animal fats. It is produced by transesterification in which, oil or fat is reacted with a monohydric alcohol in presence of a catalyst to give the corresponding monoalkyl esters. This article reports experimental data on the production of fatty acid methyl esters from waste cooking oil using sodium hydroxide as alkaline catalyst. The variables affecting the yield and characteristics of the biodiesel produced from these vegetable oils were studied. The biodiesel samples were physicochemically characterized. From the results it was clear that the produced biodiesel fuel was within the recommended standards of biodiesel fuel. Important fuel properties of methyl esters of biodiesel produced from waste cooking oil like viscosity, flash point, fire point, calorific value etc., was found out and compared to the properties of Indian standard biodiesel. Base catalyzed transesterification process is applied for optimum yield (85%) of biodiesel.

Index Terms— waste cooking oil, Biodiesel, Transesterification, Properties.

I. INTRODUCTION

The use of waste material as a source of alternative fuel is a practice of increasing popularity among the researchers worldwide. One such high value waste product is waste cooking oil (WCO) or abused fryer oil. According to INE (Spanish National Institute of statistics) about 74,000,000 lt. of waste olive oil collected every year and discarded inappropriately. With the mushrooming of fast food centers and restaurants in India, it is expected that considerable amounts of used-frying oils will be discarded into the drains. These can be used for making biodiesel, thus helping to reduce the cost of water treatment in the sewerage system and assisting in the recycling of resources. Generally cooking oil used for frying are sunflower oil, palm oil, coconut oil etc. as they are easily available, and especially so of the coconut oil which is abundantly available in south India. It is well known fact that, when oils such as these are heated for an extended time (abuse), they undergo oxidation (degradation) and give rise to oxides. Many of these such as hydroperoxides, epoxides and polymeric substances have shown adverse health/biological effects .

Used cooking oil refers to oil that has been hydrogenated after cooking. It can be converted to biodiesel by transesterification. It might be the most practical alternative of all sources due to its availability. The overall cost of biodiesel is greatly reduced if used cooking oils are used as the source and hence such biodiesels might be able to compete with petroleum derived diesels in the market. Once refined oil is subjected to frying it becomes hydrogenated and is not recommended for further use. These waste oils contain some degradation products of vegetable oils and foreign material. This does not prevent their usage as sources of biodiesels as these impurities can be easily removed by heating and filtration.

The WCO samples used in this study were of waste cooking oil, since its most commonly used oil in the restaurants and hostel kitchens. The fatty acid composition of waste cooking oil is dominated by palmitic, oleic, and stearic fatty acids and in addition to it much less proportions of myristic, lauric, linolenic, and capric acids

Fatty acids composition of waste cooking oil Palmitic acid 16 %, Stearic acid 5.21%, Oleic acid 34.28%, Linoleic acid 40.76 %.

II. TRANSESTERIFICATION

Transesterification of a vegetable oil was conducted as early as 1853, by scientists E. Duffy and J. Patrick, many years before the first diesel engine became functional. Rudolf diesel's prime model, a single 10 ft (3 m) iron cylinder with a flywheel at its base, ran on its own power for the first time in Augsburg, Germany. This engine stood as an example of Diesel's vision because it was powered by peanut oil a bio-fuel, though not strictly bio-diesel, since it was not Tran esterified. He believed that the utilization of a biomass fuel was the real future of his engine.

During the 1920s, diesel engine manufacturers altered the engines to utilize the lower viscosity of the fossil fuel (petro-diesel) rather than vegetable oil, a biomass fuel. The petroleum industries were able to make inroads in fuel markets because their fuel was much cheaper to produce than the biomass alternatives. The result was, for many years, a nearer elimination of the biomass fuel production infrastructure. Only recently have environmental impact concerns and a decreasing cost differential made biomass fuels such as bio-diesel a growing alternative.

In the 1900s, France launched the local production of biodiesel fuel (known locally as diester) obtained by the

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2	An effective prediction analysis using j48	Prabaharan S	CSE	ARPN Journal of Engineering and Applied Sciences	2014-15	1990-6145	https://www.ugc.ac.in/pdfnews/5283580_UGC-Cancelled-List.pdf
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6	Theoretical and experimental investigation on effect of injection timing on NOx emission of biodiesel blend.	Dr. G. Lakshmi Narayana Rao	MECH	Energy Elsevier Publisher	2014-15	0360-5442	https://www.scopus.com/sourceid/29348
7	Effect of EGR on performance and mission characteristics of diesel engine at advanced injection timing	Dr. G. Lakshmi Narayana Rao	MECH	International Journal Oil, Gas and Coal Technology	2014-15	1753-3309	https://www.scopus.com/sourceid/16800154757


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Adapting rough-fuzzy classifier to solve class imbalance problem in heart disease prediction using FCM

K. Srinivas*

Jyothishmathi Institute of Technology and Science,
Nustulapur, Karimnagar – 505 481, Andhra Pradesh, India
E-mail: srinivasknrphd@gmail.com

*Corresponding author

G. Raghavendra Rao

Department of Computer Science and Engineering,
National Institute of Engineering,
Opposite silk factory, Mysore – 8, India
E-mail: grrao56@gmail.com

A. Govardhan

School of Information Technology,
JNTUH University,
Kukatpally, Hyderabad – 85, India
E-mail: govardhan_cse@yahoo.co.in

Abstract: The main objective of this research is to develop a heart disease prediction technique by solving class imbalance problem. Class imbalance problem severely affects the performance of the prediction if the distribution of data is not clearly defined. To overcome class imbalance problem and achieve promising results in this work, the proposed technique is divided into three steps. Initially, the input data is given to fuzzy c-means clustering algorithm that converts the original data into equal number samples for all the classes. Then, rules are generated from the rough set theory and these rules are used for prediction with the fuzzy classifier. For testing, test data is converted into relevant space after matching with the original cluster centres and then, sample is tested with rough-fuzzy classifier. The results prove that the proposed technique generated excellent results by achieving the accuracy of 81% in Cleveland and 80% in Hungarian datasets.

Keywords: class imbalance; FCM; rough fuzzy; heart disease prediction; accuracy.

Reference to this paper should be made as follows: Srinivas, K., Raghavendra Rao, G. and Govardhan, A. (2014) 'Adapting rough-fuzzy classifier to solve class imbalance problem in heart disease prediction using FCM', *Int. J. Medical Engineering and Informatics*, Vol. 6, No. 4, pp.297–318.

AN EFFECTIVE PREDICTION ANALYSIS USING J48

Bhuvaneswari T¹, Prabakaran S.² and Subramaniaswamy V.³¹Department of Computer Science and Engineering, India²Vinayaka Missions Kirupananda Variyar Engineering College, Salem, India³SASTRA University, Thanjavur, IndiaE-Mail: basweety4@gmail.com**ABSTRACT**

Classification is the one of the well-known techniques in data mining. Based on the attributes of the object, classification assigns an object to one of numerous pre-defined categories. If information gain is not good then split attributes values into groups until we get better classification ratio. J48 is the one of the most frequently used classification techniques. In this paper, J48 is employed to effective prediction analysis of Iris data set. Three types of Iris flower with 250 instances and five attributes is used as test and training data. The results show that the accuracy of prediction is improved when compared with the existing ID3 method.

Keywords: predictive analysis, data mining, web mining, web documents, classification.

1. INTRODUCTION

Data Mining, popularly known as Knowledge Discovery in Databases (KDD), is a process of extracting hidden, previously unknown, possibly valuable information and knowledge from a huge number of incomplete, noisy, uncertain and arbitrary data. Many algorithms were developed and employed to excerpt information and discover knowledge patterns that may be suitable for decision support.

Classification is a method of discovering a set of models that depict and differentiate data classes and concepts. This model is then used to predict the class whose label is unknown [4]. The resultant model is based on the analysis of a set of data objects whose class label is known called training data. This resultant model can be represented in a variety of formats such as classification rules, mathematical formulae, decision trees, or neural networks. The aim of classification is to precisely predict the target class for each case in the data [5, 6]. Classification can be classified as binary or multiclass classification. In binary classification, data objects are assigned into one of the two groups. Multiclass classification is more complex than binary classification as three or more groups are involved [8]. Classification technique makes use of mathematical methods such as decision trees, linear programming, neural network and statistics [6].

Decision tree learning is a normally used method which uses a decision tree as a predictive model that maps observations about an item to conclusions about the item's target value. The goal is to build a model that foresees the value of a target variable based on numerous input variables [11]. Decision tree is a widely used method to model classification and prediction. Decision trees can handle high dimensional data and it can be simply converted to classification rules. The learning and classification process are simple and fast with superior accuracy. Decision tree induction algorithms have been used for classification in various applications [5].

2. RELATED WORK

NB Tree, a decision tree learner, is presented that consists of Naive Bayes classifiers as leaf nodes and used a split condition that is based on the performance of Naive Bayes classifiers in all initial-level child nodes [15]. Support Vector Machine (SVM) is indeed powerful classification methodology that has been applied in a wide range of applications. The essential idea in SVM is that the hyper plane classifier, or linear linear separability [21].

K-Nearest Neighbor (KNN) classification classifies instances supported their similarity. It is one in all the foremost well-liked algorithms for pattern recognition. It is a sort of Lazy learning where the function is merely approximated locally and every computation is delayed till classification. Associate object is classed by a majority of its neighbors. K is often a positive whole number. The neighbors are selected from a group of objects that the right classification is known [22].

Neural networks have begun as a vital tool for classification. The current research activities in neural classification have recognized that neural networks are an encouraging alternative to a number of conventional classification systems. The benefit of neural networks lies in the subsequent theoretical facets. Neural networks are data driven self-adaptive approaches that can correct themselves to the data without any explicit specification of functional or distributional form for the fundamental model [23].

A feed-forward back-propagation network called multilayer Perceptron (MLP) is the most often used neural network in pattern recognition. MLPs are supervised learning classifiers that contains input layer, output layer, and one or a lot of hidden layers that extract helpful information throughout learning and allot modifiable weighting coefficients to parts of the input layers [19, 20].

ID3 algorithm is a significant algorithm in the decision tree to this point. A new algorithm combining ID3 and Association Function (AF) is proposed due to the limitation of ID3 to select attributes with several values [1]. A random training subset is selected and a decision

Rainfall Prediction with TLBO Optimized ANN

B Kavitha Rani^{a*}, K Srinivas^a and A Govardhan^b

^aJyothishmathi Institute of Technology & Science, Karimnagar, Andhra Pradesh, India

^bDepartment of CSE & Director, School of IT
JNTUH University, Hyderabad

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Rainfall prediction is very crucial for India as its economy is based on mainly agriculture. The parameters that are required to predict the rainfall are very complex in nature and also contain lots of uncertainties. Although various approaches have been earlier suggested for prediction, the soft computing is found to be very effective in developing models which emulates human being and derives expertise like human being to adapt to the situations and learn from the experiences. In this study, rainfall prediction for Andhra Pradesh (AP) state is carried out with Artificial Neural Network (ANN). A new heuristic approach Teaching Learning Based optimization (TLBO) is used to train the weights of the ANN developed for rainfall prediction. A comparison is done with classical back Propagation learning approach and *m*TLBO (a variant of classical TLBO). The data of monthly rainfall (mm) in Coastal Andhra is collected from Indian Institute of Tropical Meteorology (IITM), Pune, India. The data set consists of 1692 monthly observations during years 1871 to 2011. The simulated results reveal the effectiveness of ANN-*m*TLBO over ANN-BP on investigated datasets. The findings of our work will be very useful in assessing the possible drought situations in AP from the rainfall predictions.

Keywords: Rainfall Predictions, ANN, TLBO, Back Propagation

Introduction

In India the entire agriculture depends upon rain. The economy of India is mainly centered on the productivity from the agricultural outputs. It is thus a major concern to identify any trends for rainfall to deviate from its periodicity, which would disrupt the economy of the country. Even a short term prediction of rainfall is highly difficult due to the fact that parameters involved in predicting rainfall are very complex and uncertain. Rainfall-runoff³ processes are non-linear complex systems involving several contributing factors such as rainfall depth, rainfall distribution, land use, soil type, soil moisture content, etc. Due to process and model complexity, these models are often fitted without serious consideration of parameter values, resulting in poor performance during verification¹. Another problem with both conceptual and physically-based models is that empirical regularities or periodicities are not always evident and can often be masked by noise².

Artificial neural networks

In this work ANN based rainfall prediction model is proposed with a recently developed heuristic algorithm known as teaching-Learning based optimization (TLBO)^{8,9}. The weights of the ANN developed in the work is trained with TLBO technique. TLBO is a population based approach which starts with many candidate solutions and eventually achieves the desired optimum target with iterations. Unlike back propagation algorithm TLBO does not get trapped in local optima. In this work an exhaustive simulations are carried out with TLBO-ANN and BP-ANN for rainfall detection⁴⁻⁷ of AP state, mainly coastal Andhra Pradesh. ANNs are mathematical models with a highly connected structure inspired by the structure of the brain and nervous systems. ANN processes operate in parallel, which differentiates them from conventional computational methods. ANNs consist of multiple layers - an input layer, an output layer and one or more hidden layers as shown in Figure 1. Each layer consists of a number of nodes or neurons which are inter-connected by sets of correlation weights. The input nodes receive input information that is

*Author for Correspondence
Email: kavi_gdk1978@yahoo.co.in

Effective Features and Hybrid Classifier for Rainfall Prediction

KavithaRani B

*Associate Professor, Jyothishmathi Institute of Technology & Science,
Karimnagar, Andhra Pradesh, India
kavitharani0678@gmail.com*

A. Govardhan

*Professor in CSE, & Director, School of IT,
JNTUH, Hyderabad*

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Abstract

Rainfall prediction has emerged as a challenging time-series prediction problem in recent years. In this paper, we propose a novel rainfall prediction technique using effective feature indicators and a hybrid technique. Our proposed model consists of three phases, namely, layer model simulation, training phase and testing phase. At the outset, the input rainfall dataset is preprocessed using the feature indicators. There are five feature indicators used in the preprocessing step namely, channel index (CI), ulcer index (UI), rate of change (ROC), relative strength index (RSI) and average directional movement index (ADX). Subsequently, feature matrices are formed based on the preprocessed rainfall data. Once the feature matrix is formed, the prediction is done based on the hybrid classifier. In the hybrid classifier, artificial bee colony algorithm is combined with the genetic algorithm for training the feed forward neural network. The performance of the algorithm is analyzed with the help of real datasets gathered from Rayalascema, Aandhra and Telangana regions. Finally, from comparative analysis it is established that the proposed rainfall prediction yields better result (MAC=4.0672) when compared with Artificial Bee Colony with Neural Network.

Keywords: *rainfall prediction, hybrid classifier, feature indicator, ABC, genetic, FFNN*

1. Introduction with Challenges

A constantly altering climate conditions are observed in the present day world. Particularly in the agricultural segment of a country [1] climate changes lead to far reaching results. Rainfall forecast is very important for agriculture division and suitable for diverse features of climate change. In the third world countries like India, the whole agriculture depends upon rain and as a matter of rain is one of the amazing gifts of nature. It is normally believed that rainfall is changeable. Real-time water resources estimation is described as a quick estimation of the water resources produced in a rainfall incident or in a past era from an exact day of the year to the existing rainfall event [2]. The recognition of the situation of rainfall in advance can help in supervising and dealing with agricultural administration and failure prevention [1]. For food production plan, water resource management, and all action plans in nature, information regarding rainfall is significant. The incidence of

extended dry period or heavy rain at the decisive stages of the crop growth and enlargement could lead to significant decrease in crop yield [3].

The presentations of both stochastic and deterministic rainfall forecast models [4] are affected as rainfall is one of the most complicated components of the hydrological cycle to forecast, and is gigantically doubtful. In every place rainfall is not a usual event. It has a few seasonality results. Hence, the rainfall forecast problem is not similar to other usual atmospheric parameters like temperature, humidity, etc. Rainfall is furthermore a time series record like atmospheric pressure, temperature, vapor pressure, relative humidity, radiation, etc [5]. At local and national levels an extensive array of rainfall forecast methods are used in weather forecasting. There are basically two approaches to forecast rainfall, such as the empirical and dynamical techniques. Over various parts of the world the empirical approach is based on the study of historical records of the rainfall and its correlation to a range of

Bevel microstrip printed antenna for satellite communication

Samiran Chatterjee^{1#}, Santosh Kumar Chowdhury^{2#}, Partha Pratim Sarkar^{3*}, Debasree Chanda (Sarkar)^{4*}

^{1#}ECE Department, West Bengal University of Technology, RCC Institute of Information Technology, Beliaghata, West Bengal, India

^{2#}ECE Department, West Bengal University of Technology, Neotia Institute of Technology, Management & Science, Jhinga: P.O: Amira, Diamond Harbour Road, West Bengal, India

^{3,4*}USIC Department, University Of Kalyani, Nadia, West Bengal, India

*E-mail: ¹samiranengineer@gmail.com; ²santoshkumarchowdhury@gmail.com, ³parthabe91@yahoo.co.in; ⁴dsarkar70@gmail.com

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A single feed, single layer compact bevel cut rectangular patch antenna is proposed. The bevels are cut at the left-top corner and the right-bottom corner. The 1st resonant frequency (4.25 GHz) is applicable for short band radio wave communication and the other resonant frequency (6.93 GHz) is applicable for radar communication. All the results are simulated by using IE3D, a MoM based software and the results are verified by the VNA network analyzer. This paper includes the bandwidth, return loss, vswr range and radiation pattern.

Keywords: Bevel, Feed, Layer, Patch, Resonant frequency, Antenna

1 Introduction

For new era of communication, design of compact microstrip antenna creates a lot of interest among the young engineers especially for microwaves engineer¹. For the portability of microwave devices, we need small, light weight and compact antenna and on this ground Compact Microstrip Antenna is the most suitable device. For microwave communication as well as also for the wireless communication, now-a-days more than one operating frequency is required due to many reasons. The two operating frequencies are required mainly because most of the microwaves and wireless engineers use different communication bands and for uses of different bands different frequencies are used by the engineers. Therefore, recently the engineers design antennas which have multiband characteristics. Another criteria needed to design the antenna is size reduction which is the new technique and in this method the size of the antenna is the same for conventional as well as proposed antenna. For size reduction the most useful technique is to cut different structures in the proper position on the conventional microstrip antenna²⁻⁵. Reducing the size of the antenna means the resonant frequency of slotted antenna is drastically reduced as compared to conventional antenna⁶⁻⁸. There are so many antennas are used to reduce the size of proposed antenna like

DRA (Dielectric Resonator Antenna), fractal antenna¹⁵⁻²⁰ etc. But the above mentioned antennas are very difficult to design as compared to microstrip patch antenna. Now the structure of fractal antennas are just like a euclidean geometry structure and it is a combination of triangle, square and circles etc. So fractal antennas are very much difficult to design and DRA requires high dielectric constant substrates (more than 20) which are not readily available. Now-a-days the size of the compact microstrip antenna is very small and miniaturization is possible so these antennas are increasing the demand of their application in various communications especially microwave and mobile communication⁹⁻¹⁰. In the present paper, two bevels are cut at the left-top corner and the right-bottom corner to increase the return loss and gain bandwidth performance. It also gives the increased frequency ratio for the proposed compact microstrip printed antenna. For size reduction of the antenna, we need dielectric constant with high values¹¹⁻¹⁴. Our aim is to design the antenna with multiband operation and increased frequency ratio as well as increase the operating bandwidth. The simulation has been carried out by IE3D²¹ software which uses the MOM method and verified by measurements. This is applicable to C-band microwave frequency in the band range 4-8 GHz



Theoretical and experimental investigation on effect of injection timing on NO_x emission of biodiesel blend



S. Saravanan^{a,*}, G. Nagarajan^b, G. Lakshmi Narayana Rao^c, S. Sampath^d

^a Department of Automobile Engineering, Sri Venkateswara College of Engineering, Tamilnadu, India

^b ICE Division, Department of Mechanical Engineering, College of Engineering, Anna University, Tamilnadu, India

^c QJS Institute of Technology, Ongole, Andhra Pradesh, India

^d Department of Automobile Engineering, Rajalakshmi Engineering College, Thandalam, Chennai, India

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ABSTRACT

The present work explores the possibility of simultaneous reduction of NO_x and smoke of a stationary CI (compression ignition) engine fuelled with biodiesel blend. Fuel injection timing is retarded which resulted in lower NO_x emission with an increased smoke intensity. NO_x emission of the biodiesel at the standard and retarded injection timing was predicted with the help of developed correlations and the same was compared with the NO_x emission experimentally determined. It was observed that the predicted NO_x emission of biodiesel is comparable with the experimentally determined. Fuel injection pressure was increased at the retarded injection timing and its effect on NO_x and smoke emission was investigated. It was observed that the increase in smoke intensity resulting from the retarded injection timing was reduced significantly by increasing the fuel injection pressure.

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1. Introduction

NO_x emission of the biodiesel fuelled engines is significantly higher than that of the petroleum diesel fuelled engines [1–7]. As an oxygenated fuel, biodiesel supplies additional oxygen from the fuel in addition to that contained in the excess air admitted into the combustion chamber. This resulted in higher NO_x emission for biodiesel fuelled engines. Several attempts were made to reduce the NO_x emission of CI (compression ignition) engine fuelled with diesel and biodiesel with combustion process modification methods [8–19]. The reduction in NO_x formation during the combustion process is mainly due to the decrease in the maximum temperature reached or the reduced oxygen availability. Retarded injection has been recognised as an effective way to reduce NO_x emissions [20]. However this resulted in a loss in fuel economy and increased smoke [21]. Exhaust gas recirculation has been proved to be a very effective NO_x reduction technique, particularly when the exhaust gas is cooled before admission into the intake manifold [22]. Cooled EGR (exhaust gas recirculation) reduces the peak flame temperature and oxygen partial pressure in the initial part of the

flame [23]. Apart from this, exhaust gas treatment methods also attempted to eliminate the formed NO_x emission from the exhaust gases before releasing into the atmosphere [24–28].

Mani and Nagarajan [10] and Sayin and Canakci [13] reported that retarding the fuel injection timing by 3 CAD (crank angle degree) and more will increase the smoke intensity with decrease in BTE (brake thermal efficiency). Payri et al. [19] investigated the combustion and exhaust emissions of a heavy-duty diesel engine at retarded fuel injection timings. It was inferred that at retarded fuel injection timing NO_x emission was lower than standard injection timing with a significant penalty in fuel efficiency. Monyem and Van Gerpen [14] reported that by retarding the injection timing by 3 CAD, the NO_x emission of biodiesel reduced significantly with significant increase in smoke emission. Henein [20] reviewed that NO_x emission was reduced in a DI CI engine through retardation of fuel injection timing with loss of fuel economy. It was stated that the solid particulate emissions increase with injection timing retardation in the DI engine, but can be reduced by increasing the fuel injection pressures [20].

It was inferred that combustion modification methods reduce the NO_x emission of the engine with significant increase in smoke intensity and decrease in thermal efficiency. Angle of retardation is restricted to decrease the side effects as cited earlier in this section. It was also inferred that there is a need for a method to lower the NO_x

* Corresponding author. Tel.: +91 4427152000; fax: +91 4427162462.

E-mail addresses: saran@svce.ac.in, ldhayapriyan@yahoo.co.in (S. Saravanan).

Effect of EGR on performance and emission characteristics of diesel engine at advanced injection timing

S. Saravanan*

Sri Venkateswara College of Engineering,
P.B. No: 3, Pennalur, Sriperumbudur,
Tamilnadu, 602105, India
Fax: +914427162462
E-mail: idhayapriyan@yahoo.co.in
E-mail: aadhavan.1974@gmail.com
*Corresponding author

G. Lakshmi Narayana Rao

QIS Institute of Technology,
Ongole, 523272, Andhra Pradesh, India
E-mail: glnrao_68@yahoo.co.in

Abstract: This work attempts to reduce the smoke density of diesel engine by advancing the fuel injection timing and also the NO_x emission of the engine by introducing EGR at the advanced injection timing. A single cylinder 4.4 kW air cooled, naturally aspirated, stationary diesel engine was utilised for the investigation. Engine tests were conducted at different loads at standard injection timing and advanced injection timing with and without EGR and performance and emission parameters were measured. It was observed that the smoke density was decreased by 33% at advanced injection timing with 20% increase in NO_x emission. As a result of EGR, NO_x emission was decreased by 63% with marginal increase in smoke density. The increase in smoke density resulted from EGR is lower than the smoke density of the engine at standard injection timing. Advanced injection timing with EGR increases the maximum heat releases rate of the engine. [Received: August 27, 2012; Accepted: March 15, 2013]

Keywords: diesel engine; injection timing; EGR; NO_x; smoke density.

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Biographical notes: S. Saravanan received his PhD in Mechanical Engineering from Anna University, Chennai, Tamilnadu, India in 2013. He is currently working at the Department of Automobile Engineering, Sri Venkateswara College of Engineering, Sriperumbudur, Tamilnadu, India. He has done his doctorate in IC Engines and his research interests are in the areas of alternative fuels, combustion, heat transfer systems, thermodynamics, and renewable energy sources. He has completed one testing project and is currently handling one funded project. He has published 31 papers in international journals and 23 papers in national and international conference proceedings.