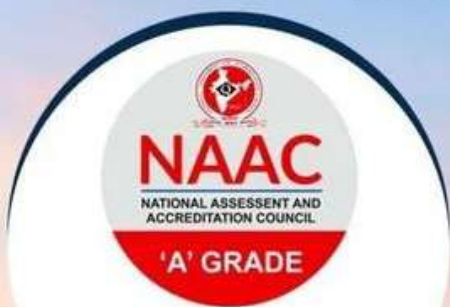


TODAY'S DECISIONS WILL DETERMINE TOMORROW'S DESTINY.

Think Wise - Choose Wise!



NEURANEX

July - Dec 2023 (vol-I)

Department of Computer Science & Engineering(AI&ML)

Jyothishmathi Institute of Technology & Science started its academic journey in 1997 with a quest to impart technical education to the rural youth. The commitment towards providing the highest quality of education through innovative teaching methods to its students has always brought laurels. Jyothishmathi Institute of Technology and Science (autonomous), Karimnagar, has signed a Memorandum of Understanding (MoU) with T-Hub, Talent Farm, TASK, Edunet Foundation, and SAP - Centre of Excellence in Hyderabad.

MAGAZINE OVERVIEW

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Program Educational Objectives (PEOs)

Fundamental Knowledge: Graduates will build a strong foundation in mathematics, computer science, and artificial intelligence principles to analyze, model, and solve complex problems in AI and machine learning.

Core Competencies: Graduates will gain expertise in core areas of artificial intelligence and machine learning, enabling them to design and implement intelligent systems for real-world applications.

Breadth: Graduates will acquire interdisciplinary knowledge to integrate AI/ML solutions across various domains such as healthcare, finance, robotics, and smart environments, adapting to emerging technologies and global needs.

Professionalism: Graduates will demonstrate ethical behavior, teamwork, leadership, and communication skills, contributing effectively in collaborative and multicultural work environments.

Learning Environment: Graduates will pursue lifelong learning through higher education, industry certifications, and innovation-driven projects in a dynamic and inclusive learning environment that nurtures creativity and entrepreneurial thinking.

INSTITUTE VISION

To be a premier engineering institution striving continuously to deliver quality technical education, nurturing competent engineers capable of achieving global excellence with societal consciousness

INSTITUTE MISSION

- To embrace emerging teaching techniques that equip students to face technical challenges with confidence and competence.
- To cultivate a culture of innovative thinking that inspires students to develop creative solutions to real-world problems.
- To instil leadership qualities and foster an entrepreneurial mindset in students, enabling them to contribute positively to society.

DEPARTMENT VISION

To emerge as a center of excellence in Artificial Intelligence and Machine Learning, offering quality technical education that empowers future innovators to achieve global excellence and drive intelligent solutions for societal advancement

DEPARTMENT MISSION

- To provide quality education in AI and ML, equipping students with advanced computational skills to excel in a globally competitive environment.
- To foster a spirit of innovation and critical thinking, enabling students to develop practical solutions that benefit society.
- To promote strong collaborations with industry and academia, nurturing an entrepreneurial mindset and continuous professional growth in the field of AI and ML.

LANDMARK ACHIEVEMENTS



JYOTHISHMATHI
INSTITUTE OF TECHNOLOGY AND SCIENCE
AUTONOMOUS

INDIA's
Best Engineering Colleges

AAA
RANKING

RATING IN
SOUTH ZONE

by
CAREERS 360
A Career is a Life

Ranked among the best
to give you the best!

JITS is celebrating some impressive achievements! They have secured an AAA Ranking in the South Zone by Careers360, which highlights their commitment to excellence in engineering education. Additionally, JITS is recognized as a UGC Autonomous Engineering College, has a NAAC Grade "A", and holds NBA Accreditation. These accolades position JITS among India's top engineering colleges, dedicated to providing students with the best learning experience.

GUEST LECTURES

The Department of Computer Science and Engineering (AI & ML) hosted a two-day online guest lecture on "Reinforcement Learning" on 21st and 22nd August 2023. Dr. Jitendra V. Tembhurne from the Indian Institute of Information Technology, Nagpur, covered key topics such as the basics of probability and linear algebra, the definition of a stochastic multi-armed bandit, the concept of regret and achieving sub-linear regret, as well as the UCB algorithm, KL-UCB, and Thompson Sampling.



One-week Faculty Development Program (FDP) on "MICROSOFT AZURE AI ENGINEER ASSOCIATE" from 10th to 14th July 2023. Faculty members enhanced their knowledge of cutting-edge AI services, global infrastructure, and the latest development tools using Azure. They learned to build and deploy AI solutions with vision, speech, language, and decision-making models, and to protect multi-cloud and hybrid environments with integrated security. The program also covered Web Jobs for background processing, and the use of Blob, Table, and Queue services for communication and storage. Azure Table Service, a NoSQL database, and Blob Service for storing unstructured data were also discussed.

One-day online workshop on "Global Requirements of AWS and DevOps" on 17th October 2023. Mr. K. Santhosh Rupesh, a BiZ Cloud Expert, addressed the students, sharing his insights on Amazon Web Services and cloud-related platforms. He explained DevOps and the current market situation in cloud computing, providing detailed knowledge and real-time examples to enhance the students' understanding.



A Three Day Workshop on "Tableau" for IV year students was organized by JITS on 25.11.23, 01.12.23 and 02.12.23 at our college premises participated CSM Department students and coordinated by Dr V. Neelima Head-CSE(AI&ML). Around one hundred and fourteen students were participated in this event. This Workshop helped the students to: Understand the basic concepts Tableau . Its visual analytics platform transforming the way we use data to solve problems—empowering people and organizations to make the most of their data. How it supports powerful data discovery and exploration that enables users to answer important questions in seconds. It can connect to several data sources that other BI tools do not support. Tableau enables users to create reports by joining and blending different datasets.



GUEST LECTURES

An interactive session on “Emerging Technologies-Smart Manufacturing” for II and III year CSE(AI&ML) students on 29th December 2023. Coordinated by Dr. P. Pranitha, the session saw participation from around 200 students. The session covered the basics of smart manufacturing, its visual analytics platform, and its role in transforming data usage for problem-solving. Students learned about fully-integrated, collaborative manufacturing systems, cloud connectivity, and the integration of AI and smart tools to enhance adaptability and customization. The session highlighted the importance of smart manufacturing in improving supply chain models and overall business operations.



A three-day workshop on “POWER BI” was organized by JITS for IV year CSE(AI&ML) students on 25.11.23, 01.12.23, and 02.12.23, coordinated by Dr. V. NEELIMA, Head-CSE(AI&ML). Around 172 students participated in this event. The workshop helped students understand the basic concepts of POWER BI and its visual analytics platform, which transforms data usage to solve problems and empowers organizations. It demonstrated how POWER BI supports powerful data integration from various sources, providing visually immersive and interactive insights. Students learned about securing data without scripting and connecting to multiple data sources, enabling them to create comprehensive reports by blending different datasets.



An Awareness Programme on Higher Studies Abroad was organized by JITS on 02-11-2023 at the college premises, coordinated by Dr. V.

Neelima, Head-CSE(AI&ML). Around 176 department students actively participated in this event. The programme aimed to create awareness about higher study opportunities abroad, including prerequisites, application timelines, and admission processes. It encouraged students to gain new skills for pursuing higher education abroad and helped them identify suitable countries, fields of study, programs, and universities that match their profiles and resources.



On 18-10-2023, the Department of CSE(AI&ML) at Jyothishmathi Institute of Technology & Science organized an interactive session with Nagesh Kunamneni, President and CSO at BizCloud Experts, Dallas, USA. He discussed recent advances in Computer Science & Engineering with the students. The session aimed to promote entrepreneurship and innovation, with Mr. Nagesh announcing that BizCloud Experts would provide projects to JITS students and assist them in collaboration with Hyderabad and USA consultants. He also mentioned plans to help students launch start-ups and explore tie-ups with US universities to benefit JITS students.



DEPARTMENT EVENTS

CODE-A-THON EVENT

The **CODE-A-THON** event was held on 13/10/2023 at Lab 6 and Lab 7. It was coordinated by Dr. V. Neelima, Associate Professor of the CSE(AI&ML) Department. Student coordinators included P. SiriChandana from IV CSM. The event saw the participation of nine students.



The Department of Computer Science & Engineering organized a Certification Course on "**C-Programming**," with lectures delivered by Dr. M. Anjan Kumar, Associate Professor, CSE(AI&ML). Students actively participated throughout the sessions, which began with an introduction to programming languages. The course covered various modules, including Introduction (5 classes), Control Structures (5 classes), Arrays and Functions (5 classes), Structures, Unions, and Pointers (7 classes), and File Handling and Basic Algorithms (8 classes).



The **Tech-Word Crossword Puzzle** event was held on 23/08/2023. Level-1 took place in respective classrooms, while Level-2 was conducted in Lab-7. Faculty coordinators included Dr. A. Manjula, Associate Professor, Mr. G. Srikanth, Mrs. G. Pranavi, and Mrs. K. Vanitha, all Assistant Professors in the CSE (AI&ML) Dept. Student coordinators were M. Prathima Rao and B. Harshitha from I, K. Rishitha and Praveen from , Loukya and U. Sridhar , and Gayathri and Siddartha from IV CSM. The event saw enthusiastic participation from 291 students.

In association with the Computer Society of India (CSI), organized a "**Technical Quiz Competition**" on 18th July 2023 for II year CSM students (sections A and B). The event aimed to spark interest in Computer Science and Engineering through challenging questions. The quiz included word power, jumbling words, identifying logos, taglines, and connecting pictures to technical terms, engaging 122 students for three hours. Rules were explained at the start, and winners were selected based on evaluation criteria. Certificates were awarded to participants.



JITS HIGHLIGHTS : ACHIEVEMENTS, PLACEMENTS, AND CELEBRATIONS

FACULTY Achievements & Publications:

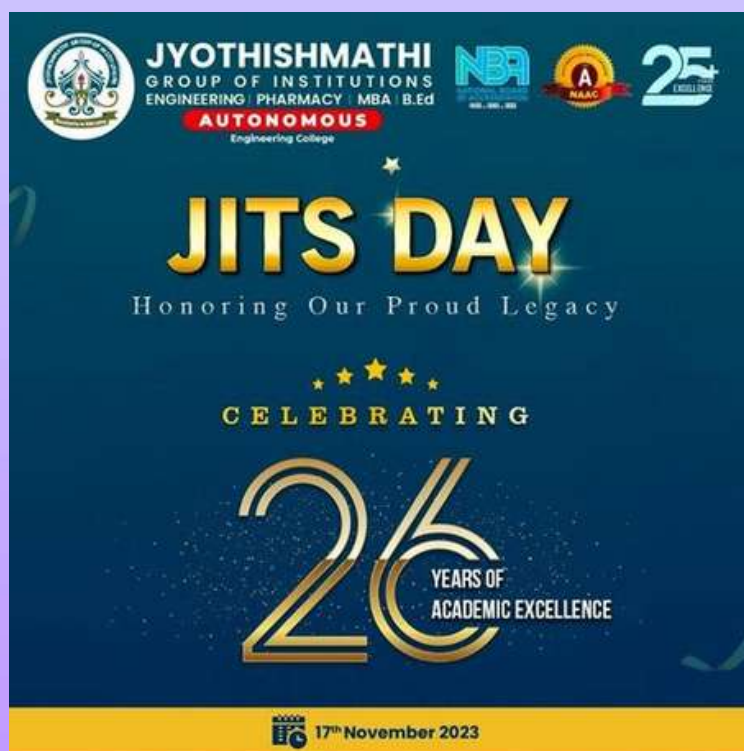
- **Dr.A.Manjula** successfully completed NPTEL in Introduction of Internet Of Things. **N Venkateswaran, R Jegadeesan, Dava Srinivas, N Umapathi, G Karthick**, 2023, "Utilizing Ensemble Learners Help Prevent Unauthorized Access Into Iot Networks", European Chemical Bulletin, Eur. Chem. Bull. 2023, 12 (S3), 5994 - 6003, DOI: 10.31838/ecb/2023.12.s3.669. (Scopus) **R Jegadeesan, A Srinidhi, P Pranitha**, "Sales Analysis and Prediction in Big Mart", "Journal Of Xi'an University Of Architecture & Technology", ISSN No : 1006-7930, Volume XV, Issue 7, 2023, Page No: 186-191, <https://doi.org/10.37896/JXAT15.7/32216> (Scopus) **R Jegadeesan, Durga Bhavani, Dava Srinivas**, 2023, "A Robust Approach for Effective Spam Detection using Supervised Learning Techniques", Journal of Xi'an University of Architecture & Technology, Volume XV, Issue 10, ISSN No : 1006-7930, Page No: 13-25, <https://doi.org/10.37896/JXAT15.10/32639> (UGC-SCOPUS). **Dr.R. Jegadeesan1, Dr Dava Srinivas2, Dr N Sankar Ram3 Ms Jhansi**, 2023, "URL PHISHING DETECTION USING DEEP LEARNING AND MACHINE LEARNING TECHNIQUES", Advances in Artificial Intelligence & Machine Learning in Big Data Processing, AAIMB, 2023, 17-18 Aug 2023, S A Engineering College, Chennai. (Scopus)

Placements:

- Prasanna madupu placed at APTROID consulting pvt.ltd with
- 3.5LPA Sravan Bukka placed at Quest IT solutions with 1.8LPA

JITS Celebrates 26 Years of Excellence:

- Jyothishmathi Institute of Technology and Science (JITS) recently marked a significant milestone, celebrating 26 years of knowledge, innovation, and growth. The event was a grand success, highlighting the institution's journey and its commitment to nurturing future leaders. The celebration
- included various activities and programs that showcased the academic excellence and achievements of JITS. The institution proudly holds NAAC Grade 'A' status and NBA Accreditation, further solidifying its reputation as a premier engineering college. For more details on the
- celebration and our ongoing initiatives, visit our website at JITS (<https://jits.ac.in/>).



BEYOND CLASSROOM HORIZONS

Honoring the Visionaries: A Tribute to ISRO's Pioneers and Achievements:

JITS students form human chain into '**ISRO**' hailing the success of Chandrayaan-3 Students of Jyothishmathi Institute of Technology and Science (JITS), Autonomous Engineering College have formed into a human chain in the form of "**ISRO**" for the successful landing Chandrayaan-3 on South Pole of the Moon and emerging as the first country in the world on Wednesday evening (23/08/2023). With lots of excitement since morning, the students prayed for the **success of the mission Chandrayaan-3 and safe landing of Vikram lander** on the Moon. Along with prayers for the safe landing of Vikram lander on the Moons, the students also formed a human chain as "ISRO" hailing the scientists of the country for their true spirit and scientific tempo. They carried national flags and raised slogans of Bharath mata ki Jai, Jai ho India etc.



- Earlier, Former Director, Directorate General of Security, Cabinet Secretariat, New Delhi Dr. T P Sasi Kumar delivered an induction lecture on 'Learn to Learn' for the B.Tech first year students. Explaining the students to lay a strong foundation in their career from the first year onwards, Mr. Sasi Kumar urged the students to learn beyond books, classroom and teachers. He explained how one can learn from one's own experiences as well. He also motivated the students on the positive attitude amplifies achievement, aptitude and attitude. He also
- empowered the students on techniques of enhancement of memory skills. JITS Chairman Sri J. Sagar Rao, Principal Dr. K S Rao, Dean (Academics) Dr. P K Vaishali, Dean (Student Affairs) Dr. P. Sampath Rao and others were also present.

Former students and teachers of Jyothishmathi Academy recently gathered for a nostalgic reunion, reminiscing about their school days. The event was filled with emotional speeches, cheers, and tears. Chairman Sri. J Sagar Rao expressed his happiness and shared joyful tears, reflecting on the school's progress. Secretary J. Sumith Sai, an alumnus, played a crucial role in organizing the event along with other alumni. The former Principal and other teachers were also present, making it a memorable occasion for everyone involved.



The Jyothishmathi Academy, Karimnagar, on Sunday, organised an alumni and teachers meet at Jyothishmathi Institute of Technology and Sciences (JITS) with much fanfare. On the occasion, the students reconnected with their friends and teachers and cherished their memories spent in the school and with the friends and teachers. It was really an emotional reunion after several decades. The programme was organised under the banner of '**Welcome Back**', Alumni and Teachers meet. As soon as they entered the campus, the students welcomed the alumni and teachers by presenting them with flowers. They immediately visited the chambers of Chairman Sri. J Sagar Rao and took his blessings and exchanged pleasantries and recollected sweet old memories. Later, they rushed to their classrooms, hostel rooms, dining hall and playgrounds to remember the sweet memories and took pictures. Some of the alumni recorded the entire proceeding right from their entry into the campus to the exit. The session began with the '**pada puja**' (feet washing) of their teachers. The students washed the feet of their teachers with water and applied kumkum and vermilion and offered flowers and paid obeisance for transforming their lives. They also felicitated the teachers by presenting them with shawls.



BEYOND CLASSROOM HORIZONS

JITS to sign MoUs with US universities to help students pursue higher education:

- Jyothishmathi Institute of Technology and Science (JITS) chairman Sri.J. Sagar Rao said they were holding parleys with several universities in United States of America and planning to make tie up with them for the benefit of students of JITS to study abroad for higher education after completion of their graduation.
- The JITS, which has completed its Silver Jubilee Celebrations last year, had secured NAAC A grade, NBA Accreditation and UGC Autonomous last year. The JITS is now planning to make Memorandum of Understanding (MOUs) with some of the universities in the USA and help the students study aboard for higher education with ease, he stated.
- Participating in the Fresher's day party for the students of 2023-24 on the college campus on Saturday, Mr Sagar Rao said that they were in constant touch with the universities in USA and mostly likely they would sign MoUs in the month of January 2024 tentatively. He said that they were exploring the possibilities of even providing dual degrees from India and USA. He said that they had decided to ensure that at least 100 students from JITS for higher education in USA.
- Principal Dr. K S Rao said that the JITS Secretary J. Sumith Sai was taking all measures for MoUs with several universities of USA and help the students pursue MS and secure scholarships and internships. He also advised the students not to waste time and attend classes regularly. He informed the students to improve communication and life skills. Deans Dr. K Vaishali and Dr. P Sampath Rao and others were also present.



The **77th Independence Day** was celebrated at Jyothishmathi Institute of Technology and Science (Autonomous), Karimnagar. Sri J.Sagar Rao garu, Chairman Jyothishmathi Group of Institutions hoisted the national flag.

Celebrating 76 years of freedom, various Sports, Cultural and Literary events were conducted from 11/08/2023 to 14/08/2023. The winners & runners of these events were awarded mementoes and certificate of merit.

On this occasion, Principal Dr.K.S.Rao, Dean (Academics & Audit) Dr. K. Vaishali, Dean (Student Affairs), Heads of various departments, faculty members, students participated enthusiastically.

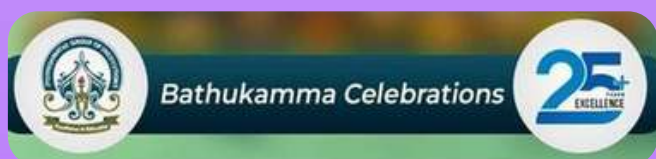
- This independence day, let's commit to upholding the harmony and unity of our wonderful country.



BEYOND CLASSROOM HORIZONS

Engineer's Day was celebrated to mark the birth anniversary of Bharath Ratna Sir Mokshagundam Vishveshwaraya by the students of Jyothishmathi Institute of Technology and Science (Autonomous) on 15/09/2023 (friday). On this occasion, the college conducted competitions in Web Designing, Technical Quiz, Code Challenge and Poster Presentations and prizes were given to the winners and runners- up. The students exhibited their projects and enlightened everyone on how by doing research in the field of engineering could excel and contribute towards the development of the nation. JITS Chairman Sri. J. Sagar Rao and Secretary Sumit Sai, Principal Dr. K S Rao, Dean (Academics) Dr. P K Vaishali and Dean (Student Affairs) Dr. Sampath Rao were present. On this occasion, the college chairman extended his wishes to the faculty members and students and called upon them to keep track of technological development and improve their knowledge to meet the global challenges and get recognized as good engineers.

- Highlighting the immense importance of Engineer's day to students, the principal said that this day was remembered for the contributions made by Dr. Vishveshwaraya in the field of engineering. He called upon the students to participate in more seminars, workshops and summits to enrich their knowledge.



JITS students celebrate **Bathukamma festivities** with gaiety:

Students and women faculty members of Jyothishmathi Institute of Technology and Science (JITS)

(Autonomous) celebrated the Bathukamma festivities with much pomp and gaiety on the sprawling college grounds on 18/10/2023 (wednesday).

Bathukamma, the floral festival, stated to be the biggest festival for the womenfolk in the Telangana state was celebrated with religious fervour by offering prayers to Goddess Gauri. Earlier, the students designed the colourful Bathukammas by arranging different varieties of flowers in a conical shape. They also designed a giant size Bathukamma and participated in the celebrations with enthusiasm and joy.

- The students, teaching and non-teaching staff arrived in their best attire and danced around the Bathukammas by singing the traditional songs. It was all fun and frolic for the students and faculty members. College Chairman Sri. J. Sagar Rao, Principal Dr. K S Rao, Dean (Academics & Audit) Dr. P K Vaishali and others greeted the students and women faculty members.

TECHNICAL CONTENT

Quantum Computing: Solving the Unsolvable

Quantum computing promises to solve complex problems that are beyond the capabilities of classical computers. Using qubits that exist in multiple states simultaneously, quantum computers can process vast amounts of data much faster than today's supercomputers. This has exciting implications for fields like cryptography, where quantum machines could crack encryption codes, and pharmaceuticals, where they could accelerate drug discovery. However, quantum computing faces challenges such as maintaining quantum coherence, which requires advanced technology to manage. Though we are still years away from fully scalable quantum machines, the potential applications in areas like artificial intelligence, materials science, and climate modeling are bound to have a transformative impact on the world.



Edge Computing: Powering Real-Time Decisions

Edge computing is reshaping data processing by bringing it closer to the source, reducing latency and bandwidth usage. This is crucial for technologies that rely on real-time decisions, such as autonomous vehicles, which need immediate data processing to ensure safety. In industries like manufacturing, edge computing supports predictive maintenance, reducing downtime by processing machine data instantly. For smart cities, it helps manage traffic systems and utilities by making real-time adjustments. Though it faces challenges in data security and privacy, edge computing is set to grow alongside the IoT boom, offering faster and more efficient ways to handle data locally.



Augmented Reality (AR) and Virtual Reality (VR): Immersive Experiences

Augmented Reality (AR) and Virtual Reality (VR) are transforming how we experience the world. AR overlays digital information onto the physical world, enhancing real-life experiences, while VR creates entirely virtual environments. Both technologies are revolutionizing entertainment, education, and healthcare. In education, students can take virtual field trips, learning in immersive environments. Retailers are using AR to let customers try products virtually, and in healthcare, VR is being used for surgical training and pain management. As AR and VR devices become more affordable and accessible, these technologies are expected to become even more deeply integrated into our daily lives, driving innovation in gaming, training, and remote collaboration.



EDITOR'S NOTE

My time at college was a transformative journey, laying the foundation for both my professional and personal growth. The Computer Science Department wasn't just a place of learning—it was a hub of innovation, collaboration, and exploration. The opportunities we had to work on real-world projects, participate in technical events, and engage in research were unparalleled. These experiences helped me develop not only technical expertise but also problem-solving and teamwork skills that have been invaluable in my career. What truly set the college apart was the support and guidance from our faculty. Their mentorship extended beyond academics, shaping us into confident, industry-ready professionals. The friendships and connections I made during those years continue to be a source of inspiration and support in my life.



It is with great pride that we present this edition of the Computer Science (AI&ML) Department Magazine. Each article, project highlight, and success story featured here is a testament to the hard work and passion of our students and faculty. As technology continues to reshape the world, this magazine serves as a platform to showcase the ideas and innovations that keep us at the forefront. Dive in and be inspired by the journey of our vibrant community. We also feature the incredible projects, hackathon victories, and internship experiences that showcase the talent and dedication of our department.

Sri Juvvadi Sagar Rao

Chairman

Sri Juvvadi Sumith Sai

Secretary & Correspondent

Dr. K. S. Rao

Principal

Dr. P. K. Vaishali

Dean (Academics & Audit)

Dr. V. Neelima

Head of the Department
(CSE(AI&ML))

Best regards,

The Editorial Team

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