



Malnad College of Engineering, Hassan

Department of Computer Science & Engineering
(Artificial Intelligence & Machine Learning)



AIML INSIGHTS INK

July - Dec 2025



PSO

- **PSO1 Analytical Thinking:** Apply the principles of analytical and programming skills to solve the engineering problems
- **PSO2 Data Engineering and Intelligent Systems:** Utilize cognitive computing, artificial intelligence, and machine learning skills within the realm of data engineering to create intelligent systems.

PEO

- **PEO1** Acquire the fundamentals and expertise in basic science, Computer Science and Engineering, Artificial Intelligence and Machine Learning principles and excel as an IT professional or an entrepreneur.
- **PEO2** Pursue Higher Studies and Research
- **PEO3** Adapt to the technological advancements by engaging in lifelong learning and exhibit professional ethics, teamwork and leadership qualities.

Message from the Desk

Greetings from the Department of Computer Science and Engineering (Artificial Intelligence & Machine Learning). AI and ML have rapidly become the driving force behind innovation across every industry, and our department remains committed to equipping students with the skills to lead in this transformative field.

This edition reflects the energy and dedication of our faculty and students — from patents and publications advancing AI-driven security and healthcare applications, to hands-on workshops on prompt engineering, big data analytics, and computer vision that keep our students at the cutting edge of emerging technology.

Our faculty continue to balance excellence in teaching with meaningful research contributions, while our students gain exposure through expert talks, industrial visits, and real-world projects that bridge the classroom and industry. We remain focused on nurturing analytical thinkers and ethical technologists who are ready to shape the future of intelligent systems.

I extend my heartfelt congratulations to everyone who contributed to the achievements featured in this issue, and my best wishes to the entire AIML fraternity for continued success.



Dr. Arjun BC

Professor & Head,
CSE (AI & ML)

Vision

To be an institute of excellence in engineering education and research, producing socially responsible professionals.

Mission

- Create conducive environment for learning and research
- Establish industry and academia collaborations
- Ensure professional and ethical values in all institutional endeavours

PATENTS

Dr. Arjun B C, along with Mrs. Harshitha S and Dr. Pramod H B, has successfully secured a Certificate of Registration of Design from the Patent Office, Government of India, for an innovative Artificial Intelligence (AI) Based Network Intrusion Detection Device. Registered under Design No. 434422-001 on October 15, 2024, this achievement underscores the team's significant contribution to advancing AI-driven security solutions within the field of cybersecurity.

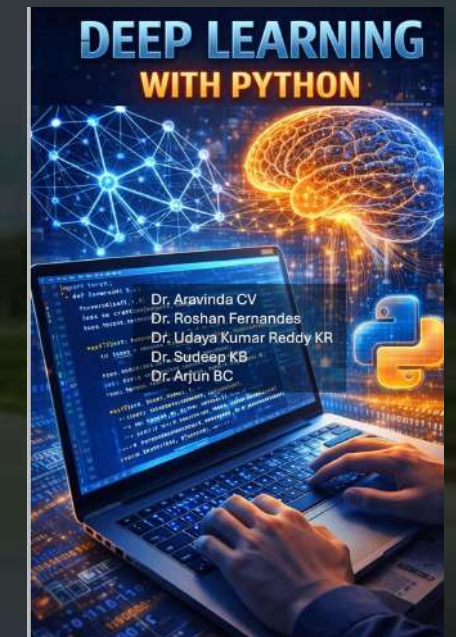
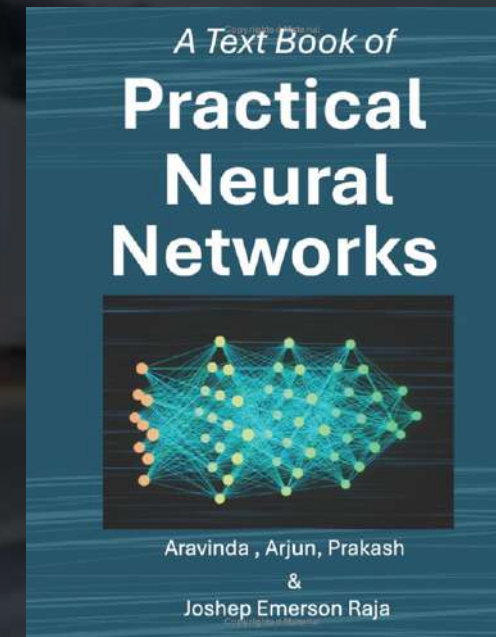


PUBLICATIONS



- 1. Dr. Arjun B C has successfully published his research on using ML and DL models for Schizophrenia detection via EEG signals in the IRJAEH (Vol. 04, Jan 2026). This significant contribution explores the integration of artificial intelligence in psychiatry to enhance diagnostic accuracy for complex mental health conditions.**
- 2. Dr. Arjun B C presented his research paper, "VertexML_Survey Paper," at the International Conference on Emerging Technologies for Multidisciplinary Innovation and Sustainability (ETMIS-2025). Organized by Coal City University, Nigeria, in December 2025, the contribution was recognized for its exceptional achievement in the field of emerging technologies.**

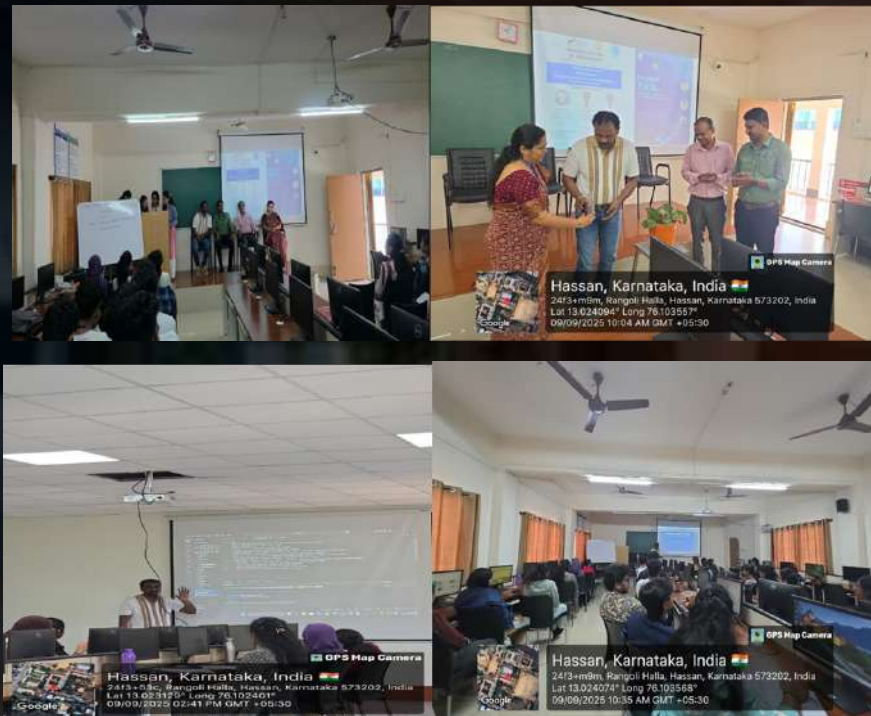
BOOKS PUBLISHED BY AIML FACULTY



- 1. Dr. Arjun B C has significantly contributed to the AI field through the publication of the textbook A Textbook of Practical Neural Networks and the registration of a patent for an AI-based network intrusion detection device. His research portfolio further includes published works on COVID-19 detection and animal classification , alongside editorial and reviewer roles for prestigious conferences like ICDCECE-2025 and ICDTE-2025.**
- 2. Dr. Arjun B C, along with co-authors Dr. Aravinda CV, Dr. Roshan Fernandes, Dr. Udaya Kumar Reddy KR, and Dr. Sudeep KB, has co-authored a new book titled "Deep Learning with Python." This publication serves as a comprehensive guide for mastering deep learning techniques and practical implementation using the Python programming language.**

EVENTS ORGANIZED BY CSE (AI & ML)

Workshop on Prompt Engineering



Organized by dept of CSE (AI & ML) . A hands on workshop on Prompt Engineering: Practical Applications and Real-World Use Cases held on 9th Sep 2025. Led by Dr. Aravinda C V, this workshop offered an in-depth exploration of Prompt Engineering, bridging the gap between the internal mechanisms of LLMs—such as tokens and embeddings—and their practical, real-world applications. Beyond tracing the evolution of generative AI, the session featured hands-on demonstrations of model performance and a critical project on PII data masking for Aadhaar and mobile numbers. By concluding with strategies for scalable cloud deployment, the workshop equipped participants with the essential skills to build accurate, secure, and production-ready AI solutions.

Technical talk on “Future of Work with AI Assistant”



Department of Computer Science and Engineering (AI & ML) hosted an insightful technical talk titled “Future of Work with AI Assistant” for 3rd-semester students held on 25th Sep 2025. Led by Mr. Harshith D from Unisys India Pvt. Ltd. and coordinated by Ms. Ankitha S, the session bridged the gap between academic theory and industry reality. Students explored the transformative role of Large Language Models (LLMs) and Cloud AI in modern workflows, gaining a practical understanding of how these technologies drive automation and data analysis. By interacting with an industry professional, participants successfully met key learning objectives, walking away with a clearer vision of current AI tools and the evolving expectations of the digital workplace.

Expert Talk on “Big Data Analytics in Computer Vision”



The expert talk delivered by Dr. Suresha D focused on the critical intersection of Big Data Analytics and Computer Vision, specifically tailored for 3rd-semester students held on 9th Sep 2025. The session highlighted how large-scale data processing enhances visual systems, enabling advanced capabilities like image-to-model transformation, pattern recognition, and vision-based biometrics. By exploring diverse applications—ranging from smile detection and interactive gaming to industrial robotics—the talk provided a comprehensive look at the challenges of scalability and the creation of robust visual pipelines. Ultimately, the event bridged the gap between theory and real-world AI deployment, encouraging students to pursue research and project work in emerging domains like object detection and intelligent visual analytics.

Industrial Visit to Innovation Centre, Manipal Institute of Technology (MIT), Manipal



The visit to the Innovation Centre at Manipal Institute of Technology (MIT) on 16th Sep 2025, showcased a premier 16,000 sq. ft. ecosystem dedicated to fostering entrepreneurship and technical excellence. Equipped with advanced tools like 3D printers and CNC machines, the centre bridges the gap between academia and industry through high-impact projects such as the Parikshit nanosatellite and the SERVE solar car. By offering critical support for patent filing, seed funding, and expert mentorship, MIT provides a blueprint for how institutions can drive economic and societal growth. The visit concluded with strong recommendations for our institution to establish similar innovation hubs and enhance industry collaborations to provide students with essential hands-on experience and a platform to turn creative ideas into real-world solutions.

EVENTS ORGANIZED BY CSE (AI & ML)

Inter college AI workflow Hackathon (Automathon 1.0)



The AIML Automathon 2025, organized by the Department of Computer Science & Engineering (AI & ML) at Malnad College of Engineering (MCE), Hassan, was a high-impact event focused on the power of low-code automation. Co-sponsored by Google Gemini and supported by institutions like AICTE and the MoE's Innovation Cell, the event featured a two-day itinerary starting with a training session on December 4th, followed by the main Automathon on December 5th. Participants worked in teams of three to master n8n, an open-source workflow automation tool, competing for a prize pool of ₹10,000. Under the guidance of Event Convenor Dr. Arjun B. C. and a dedicated team of faculty and student coordinators, the "workshop + hackathon" hybrid successfully provided students with hands-on experience in building real-world workflows and solving practical problems through automated innovation.

Project Expo -2025



The Project Expo 2025, hosted by the Department of Computer Science & Engineering (Artificial Intelligence & Machine Learning) at Malnad College of Engineering (MCE), Hassan, was a showcase of technical innovation and engineering excellence. Held on December 8th, 2025, at venue SA-206, the event provided a platform for students to demonstrate their skills in cutting-edge fields such as Artificial Intelligence, Machine Learning, and Deep Learning.

Faculty Publication

Faculty Name	Publication Title	Journal Details	ISSN/ISBN
Dr. Arjun B C	Explainable AI hybrid CNN-transformer models for enhanced COVID-19 detection in chest X-rays	Network Modeling Analysis in Health Informatics and Bioinformatics, Vol 14, 100, 2025	2192-6662
	A Comprehensive Survey of AI enabled Techniques for Automated Animal Detection and Classification in Ecological and Real-Time Applications	International Journal of Innovative Research in Technology, Vol 12, Issue 5, 2025	2349-6002
	Automated Kannada Hand Gesture Using Convolution Neural Network	International Journal of Scientific Research in Engineering and Management (IJSREM), Vol 09, Issue 05, 2025	2582-3930
Dr. Swathi H Y	Enhanced diabetes prediction using skip-gated recurrent unit with gradient clipping approach	Frontiers Endocrinology, 15, 2025	1664-2392
	Dual Strategy Based Improved Swarm Intelligence and Stacked LSTM With Residual Connection for Land Use Land Cover Classification	IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 18, 2025	2151-1535
Mrs. Sushma M V	Artificial Intelligence's Effect on Idea and Content Creation	ACERVO Journal, Vol 10, Issue 6, 2025	2237-8723
Mrs. Ankitha S	A Comprehensive survey of AI-Enabled techniques for automated legal text summarization and citation grounding in judicial applications	International Journal of Innovative Research in Technology, Vol 12, Issue 6, Nov 2025	2349-6002
Mrs. Megha H C	The Explicit Frontier: A Comparative Analysis of 3D Gaussian Splatting and the Quest for Real-Time Radiance Field Rendering	International Journal of Innovative Research in Technology, Vol 12, Issue 7, Dec 2025	2349-6002
	Media and Volume Control using Face Recognition and Hand Gestures	International Journal of Innovative Research in Technology, Vol 13, Issue 3, Dec 2025	2349-6002
	A Comprehensive Survey of Digital Twinning Systems for Medical Imaging of Brain Tumors	International Journal of Innovative Research in Technology, Vol 12, Issue 3, Aug 2025	2349-6002



3rd year Students of Computer Science & Engineering (AI & ML), secured 2nd Prize at the 24-hour National-Level Hackathon – HACKABHIGNA organized by AIT, Chikkamagaluru



MYTHREE-83 BEST ACADEMIC PERFORMANCE AWARD

Ms. Kumuda D.P. bearing USN: 4MC22C1014 is the Student of Computer Science and Engineering (AI&ML) has been conferred the Best Academic-Performance Award in recognition of her academic excellence upto 5th Semester



AYUSH D

Represented Karnataka in the National Handball Championship

NEURAL DUST : HACKING HUMAN BRAIN

Nida Fathima
4MC22C1019

Imagine moving a robot arm just by thinking, stopping long-lasting pain with a brain signal, or fixing depression by correcting faulty brain connections. These ideas, which used to only exist in movies, are now becoming possible because of 'neural dust'—tiny AI-powered sensors placed in the brain. By mixing brain science with AI, this new technology could completely change how we treat paralysis, mental health issues, and brain diseases like Alzheimer's. But with such power comes big risks: What if hackers steal or misuse your brain's private data?



Neural dust refers to wireless sensor particles smaller than a grain of sand, designed to be implanted in the brain or nervous system. These sensors record electrical activity from neurons and transmit data to external AI systems. Unlike bulky brain implants, neural dust is minimally invasive and could operate for decades without replacement. The AI decodes these neural signals to enable thought-controlled devices or deliver targeted therapies, such as stimulating neurons to treat Parkinson's tremors or blocking pain signals in real time.

Neural dust particles are injected into the bloodstream or placed near neurons during minor surgery. Using piezoelectric materials, the sensors convert neural activity into ultrasonic signals. External devices relay data to machine learning algorithms that map brain signals to specific actions like moving a cursor or emotions like detecting anxiety. The AI triggers a device (e.g., a prosthetic limb) or stimulates neurons to correct disorders like epilepsy.



In 2016, UC Berkeley researchers demonstrated this in rodents, using neural dust to monitor and regulate bladder function—a precursor to human spinal injury treatments.

Elon Musk's Neuralink is pioneering brain-computer interfaces (BCIs) with ambitions far beyond medicine. Their coin-sized implant Restores mobility(Paralyzed patients could control phones or robotic limbs via thought), Detect depression or PTSD biomarkers and auto-adjust neural activity.

In 2023, Neuralink received FDA approval for human trials after successful monkey experiments, where primates played video games using only their minds. Critics, however, warn of "brain slavery" risks if such power is misused.

NIDA FATHIMA, student of 7th Semetser wrote an Article on Neural Dust: Hacking Human Brain

Social Connect and Responsibilities Activities

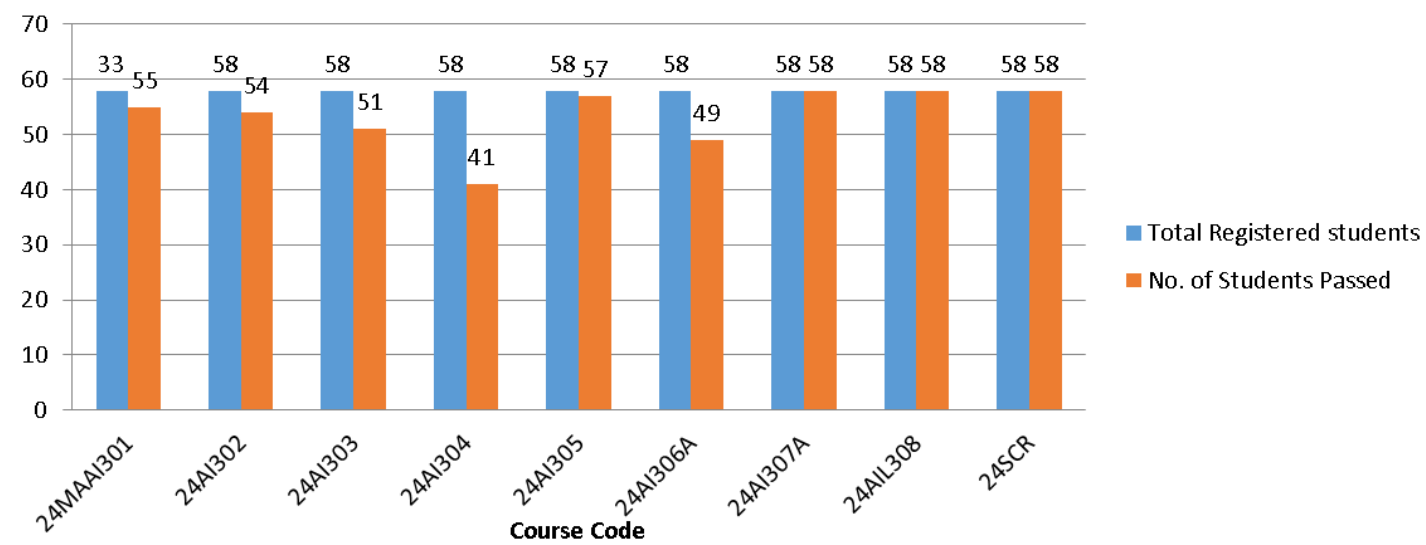
Batch 2025-26, 3rd Semester



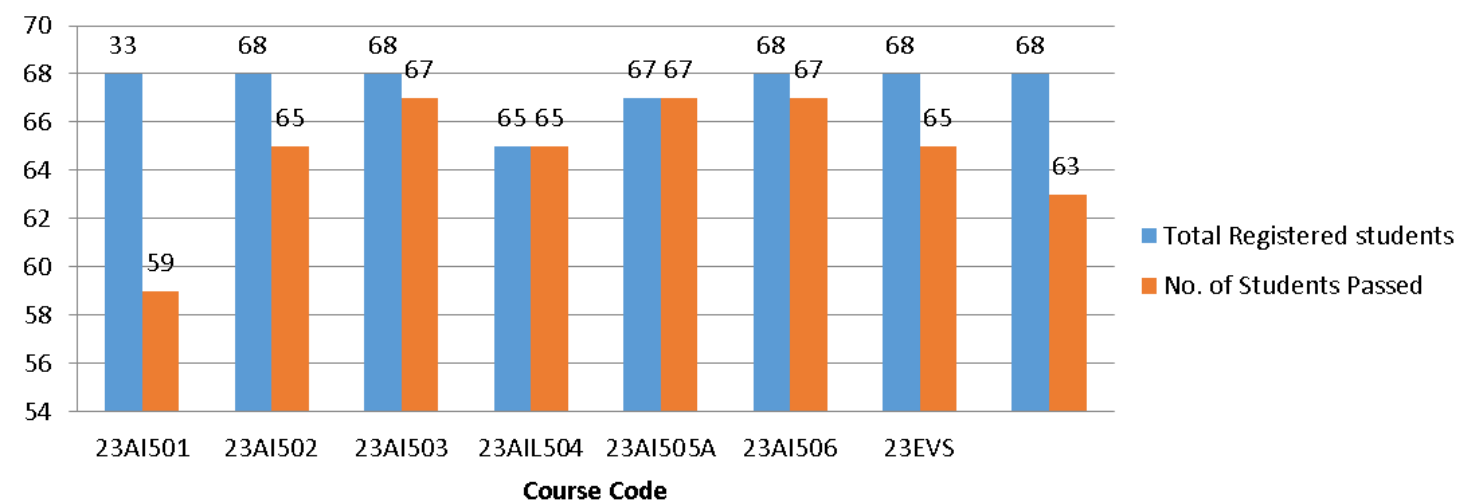
The 2025–26 odd semester 3rd semester students successfully carried out activities under Social Connect and Responsibility. They actively engaged in plantation and adoption initiatives, heritage walks, food walks, waste management practices, crafting, and visits to water conservation sites. Through these activities, students observed, participated, presented their findings, and gained positive learning experiences. These activities were smoothly conducted and coordinated by the Assistant Professors of the CS (AI & ML) Department: Megha H C, Maseeha Bhanu, Sheethal, and Manikanata Prasad J.

Result 2025-26 Odd Sem

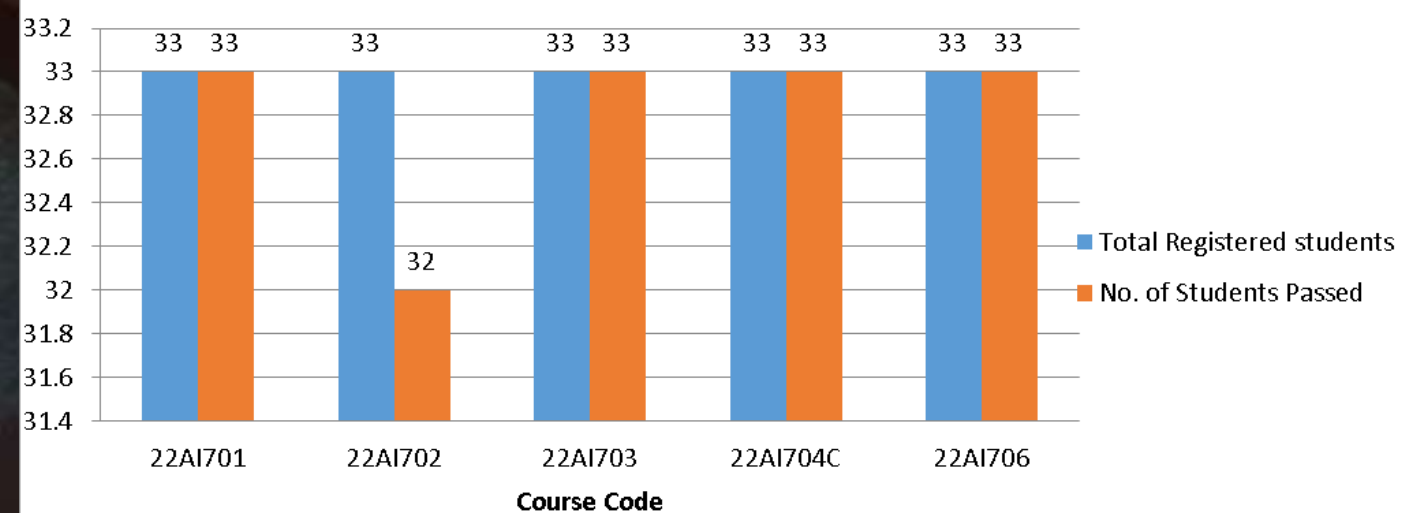
III Semester Results

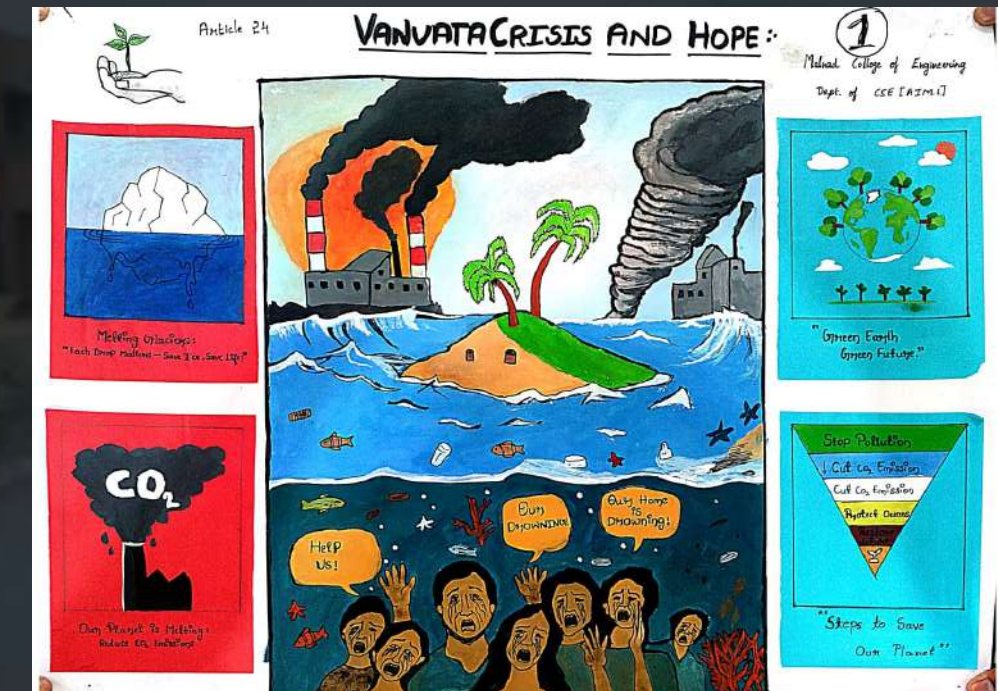


V Semester Results



V Semester Results





Students of 5th Semester, participated in Poster presentation on the topic of ಹವಾಮಾನ ಬದಲಾವಣೆ Article 30, organised by Malnad College of Engineering. It was held on 7th Nov 2025 at MCE Auditorium

1. Problem Caused by Unseasonal rain to the farmers

Team members: Chandu JH - 4MC23CI009, Kishan shetty CM - 4MC23CI022
C Basavaraj - 4MC23CI008, Nagesh - 4MC23CI033

2. The February that forgot Winter

Team members: Sanjaya M A - 4MC23CI049, Kushal K R. - 4MC23CI023,
Hruthik T D - 4MC23CI017, Raghunandan A M-4MC23CI041
Sanju M J. - 4MC24CI405

3. Vanvata Crisis and Hope

Team members: M Sadhamail - 4MC23CI026, Bhavana Gajanan Hegde -
4MC23CI006, Ananya C - 4MC23CI004 Jnyan P-4MC23CI02

