

ZERONE Activities 2025-26

Activity 01: Technical Talk Report on “Insights of Generative AI” by Mr. Vishwanath Shet



The Department of Information Science & Engineering organized an enlightening technical talk on the topic “**Insights of Generative AI**”, delivered by the distinguished speaker **Mr. Vishwanath Shet** on 17th October 2025. The session was conducted with the objective of familiarizing students and faculty members with the rapidly evolving field of Generative Artificial Intelligence (Gen AI) and its transformative impact across industries. The event witnessed enthusiastic participation from students, researchers, and faculty members who were eager to gain insights into one of the most influential technological advancements of the modern era

One of the key highlights of the session was the speaker’s explanation of what Generative AI actually means. He described Generative AI as a branch of artificial intelligence that can create text, images, videos, music, software code, and other forms of content by learning patterns from vast datasets. Through simple examples and real-world applications, he demonstrated how Generative AI differs from traditional AI systems that primarily focus on prediction and classification tasks. This distinction helped the audience understand the unique capabilities and potential of Generative AI.

Mr. Shet further elaborated on the technologies that power modern Generative AI systems. He introduced concepts such as Large Language Models (LLMs), neural networks, machine learning algorithms, and transformer architectures. While these topics are often considered complex, he presented them in a simplified and engaging manner, making them accessible even to students with limited prior knowledge of AI. He explained how models are trained using enormous amounts of data and how they learn to recognize patterns, relationships, and contextual information to generate human-like outputs.

The speaker discussed several popular Generative AI tools that have gained widespread attention in recent years. He highlighted applications such as AI-powered chatbots, content-generation platforms, image-generation tools, coding assistants, and virtual assistants. Through practical demonstrations and examples, he showcased how these tools are being used in education, business, healthcare, software development, and creative industries. The audience was particularly fascinated by examples of AI-generated images, automated code generation, and intelligent conversational systems that closely mimic human communication.

A significant portion of the talk focused on the applications of Generative AI in engineering and technology. Mr. Shet explained how AI is transforming engineering workflows by assisting in design optimization, simulation, predictive maintenance, and automated documentation. He emphasized that future engineers will increasingly collaborate with AI-powered systems to solve complex problems and develop innovative solutions. The speaker encouraged students to explore AI technologies as a complement to their technical skills rather than viewing them as a replacement for human expertise.

Activity 02: Three-Days Workshop On "Mastering Software Testing: From Manual To Automation"



The Department of Information Science & Engineering organized a three-day workshop titled **“Mastering Software Testing: From Manual to Automation”** from 1st to 3rd December 2025. The workshop was conducted by Mr. Nityananda K. Mestha, Business Development Manager at NAAS Solutions, and witnessed enthusiastic participation from final-year ISE students. The programme aimed to provide students with theoretical knowledge and practical exposure to the Software Testing Life Cycle (STLC), automation frameworks, and emerging technologies in software quality assurance.

The workshop was organized under the leadership of Prof. Manjunath H, Convener, with Dr. Ramananda Mallya K, Associate Professor, ISE, serving as Co-Convener. The initiative reflected the department's commitment to developing industry-ready professionals through continuous skill enhancement.



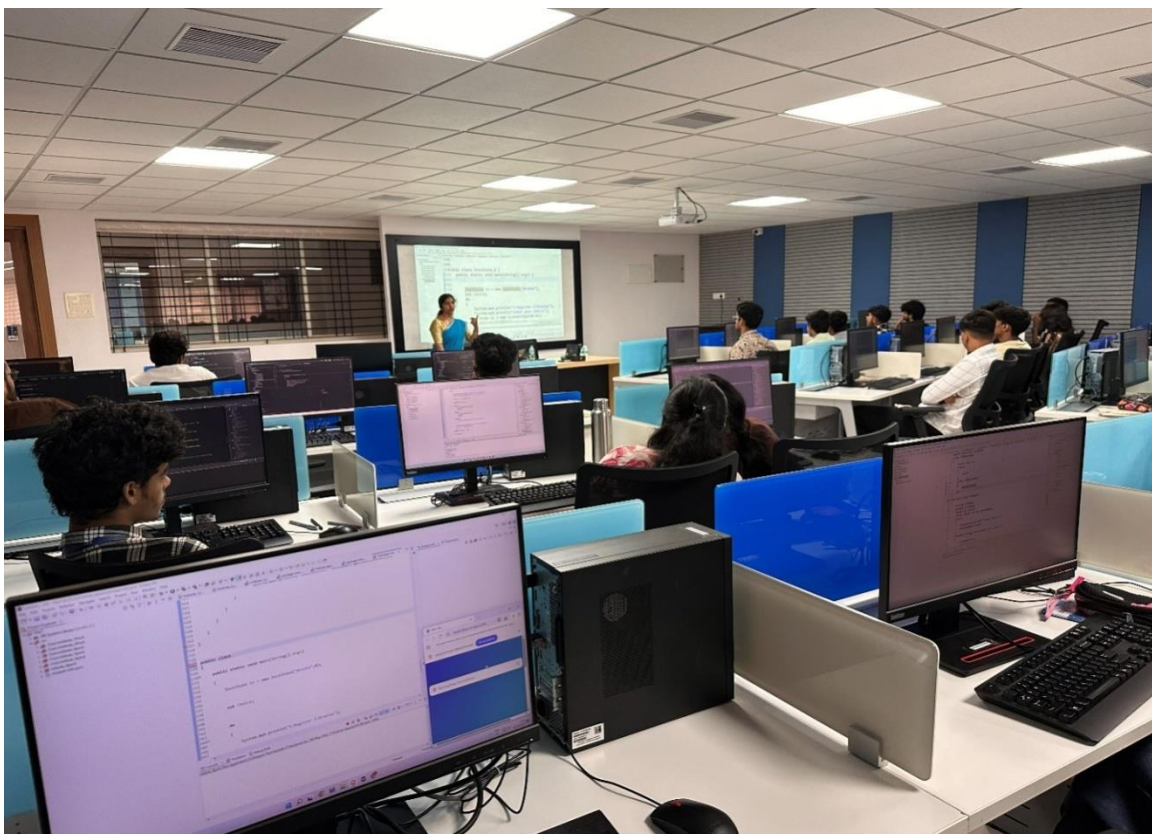
The first day focused on the fundamentals of Quality Assurance and software testing. The resource person explained key testing principles, error, fault and failure concepts, and the processes of verification and validation. Students were also introduced to Katalon Studio and gained practical exposure to web UI testing and automation.

The second day concentrated on the transition from manual testing to automated regression testing. Participants learned how automation feasibility is determined based on test repetition, complexity, and resource requirements. Hands-on sessions using Selenium enabled students to configure development environments, initialize WebDriver components, and create and execute automated test scripts for web applications.

The final day introduced the application of Artificial Intelligence and Machine Learning in software testing, including automated test generation, self-healing scripts, and anomaly detection. Students explored how AI-powered tools can identify and automatically correct broken object locators, improving testing efficiency.

The workshop concluded with an interactive session addressing students' queries on testing tools, certifications, and career opportunities. The programme successfully combined theoretical learning with extensive hands-on practice, bridging the gap between academic knowledge and industry expectations. It enhanced students' technical skills, confidence, and preparedness for careers in software testing, quality assurance, and software development.

Activity 03: “Prototyping with Java – Wireframing to Functional Demos”



The Department of Information Science and Engineering organized a three-day workshop titled **“Prototyping with Java – Wireframing to Functional Demos”** in two batches from 4 – 6 May 2026 (Batch-I) and 7 – 9 May 2026 (Batch-II) to provide students with practical exposure to the software development lifecycle, from idea generation to functional prototype development. The workshop focused on transforming concepts into working software solutions through wireframing, MVP design, Java development, testing, and product demonstrations.

The resource person, Ms. Shobha Bhardwaj, is a distinguished Software Development Trainer, Corporate Consultant, and Learning and Development leader with over 25 years of IT industry experience. She has trained professionals in Java, Python, C++, Full-Stack Development, and Software Engineering and has collaborated with leading organizations. Currently, she serves as the Director of Drutha Consulting Pvt. Ltd. The workshop was organized under the convenership of Prof. Manjunath H, Head of the Department, with Mr. Rajesh N. Kamath, Senior Assistant Professor, serving as Event Coordinator.

The workshop commenced with Product Discovery and MVP Design, where students learned to identify real-world problems, understand user needs, prioritize features, and develop Minimum Viable Products. The next session focused on Prototype and Process Design, introducing design thinking, user workflows, and low- and high-fidelity prototyping. Students developed wireframes based on problem statements and learned the importance of user-centric design.

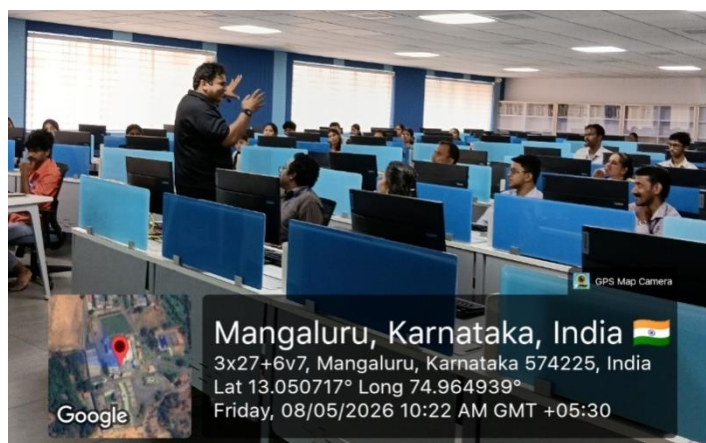
During the hands-on Java development sessions, participants transformed their wireframes into structured applications. They gained experience in setting up development environments,

organizing codebases, implementing core functionalities, and applying modular programming practices. Advanced sessions focused on feature integration, data handling, debugging, code optimization, and iterative improvement



The workshop concluded with Testing and Iteration, emphasizing quality assurance, systematic debugging, peer reviews, Agile principles, and continuous refinement. Overall, the workshop successfully bridged the gap between conceptual learning and practical software development, equipping students with valuable skills in design, Java programming, testing, and prototype development.

Activity 04: “From Idea to IP: Patents, Protection, Valuation, and CRI for Academia and Industry”



The Departments of Computer Science Engineering and Information Science Engineering, in association with the MITE KSCST IPR Cell and with the support of IQAC, organized a two-day workshop titled **“From Idea to IP: Patents, Protection, Valuation, and CRI for Academia and Industry”**, from 8th May 2026 to 9th May 2026. The workshop was conducted by Dr. Dasharathraj K. Shetty, Associate Professor, School of Computer Engineering, MIT Manipal.

The workshop aimed to create awareness and provide practical knowledge about Intellectual Property (IP), patent protection, IP valuation, commercialization, and Computer Related Inventions (CRI) among students, faculty members, and researchers.

The sessions focused on identifying patentable features in academic and industry projects and evaluating their commercial potential. Special emphasis was placed on CRI guidelines in India, enabling participants to understand the distinction between patentable and non-patentable software and computer-related inventions. Through expert lectures, case studies, and practical examples, participants learned about prior-art searches, invention disclosures, novelty, inventive steps, and patentability assessment.

The workshop also highlighted innovation management, IP value extraction, commercialization strategies, technology transfer, licensing, and startup opportunities. Participants gained insights into documenting innovations, maintaining research records, patent filing procedures, and protecting intellectual assets. Discussions on industry-academia collaboration emphasized the importance of transforming research outcomes into commercially viable products and services.

Overall, the workshop significantly enhanced participants' understanding of Intellectual Property Rights, patent protection, innovation valuation, and CRI guidelines. The practical sessions and interactive discussions encouraged students and researchers to adopt an innovation-driven approach and explore opportunities for protecting and commercializing their ideas. The event served as an effective platform for promoting innovation, strengthening IP awareness, and inspiring participants to transform research ideas into impactful and commercially viable solutions

Activity 05: ZeCoder Season 4



The Department of Information Science and Engineering successfully organized **ZeCoder Season 4** on 29th and 30th May 2026 to enhance students' coding, debugging, analytical thinking, and engineering problem-solving skills. Coordinated by **Muraghes B.S.** under the

guidance of **Dr. Sreeja Rajesh**, the event provided students with a competitive platform to apply programming knowledge through challenging technical rounds.

The first day featured two rounds. In the **Reverse Engineering Challenge**, participants analyzed expected program outputs and developed code to produce the required results, testing their programming logic and analytical skills. This was followed by the **Code Surgery Challenge**, which focused on debugging and efficient coding practices. The rounds encouraged critical thinking, innovative problem-solving, time management, and the ability to perform under pressure.

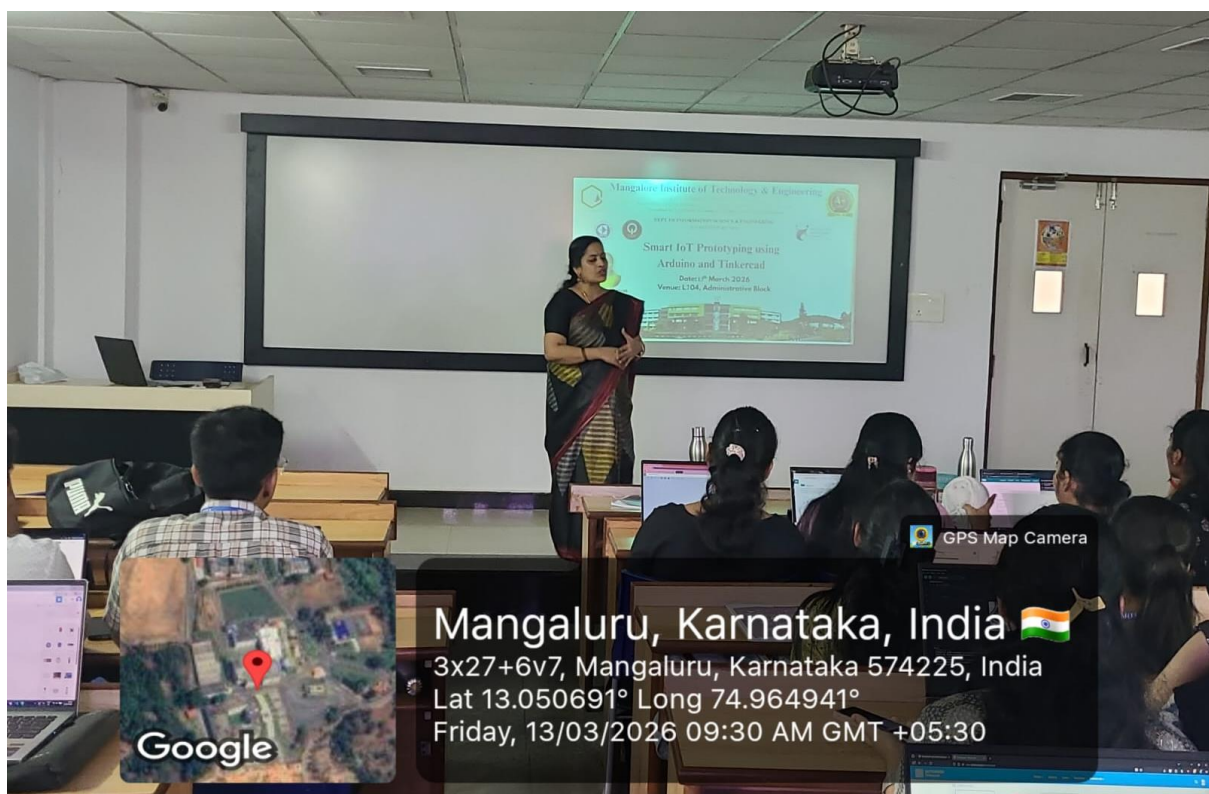
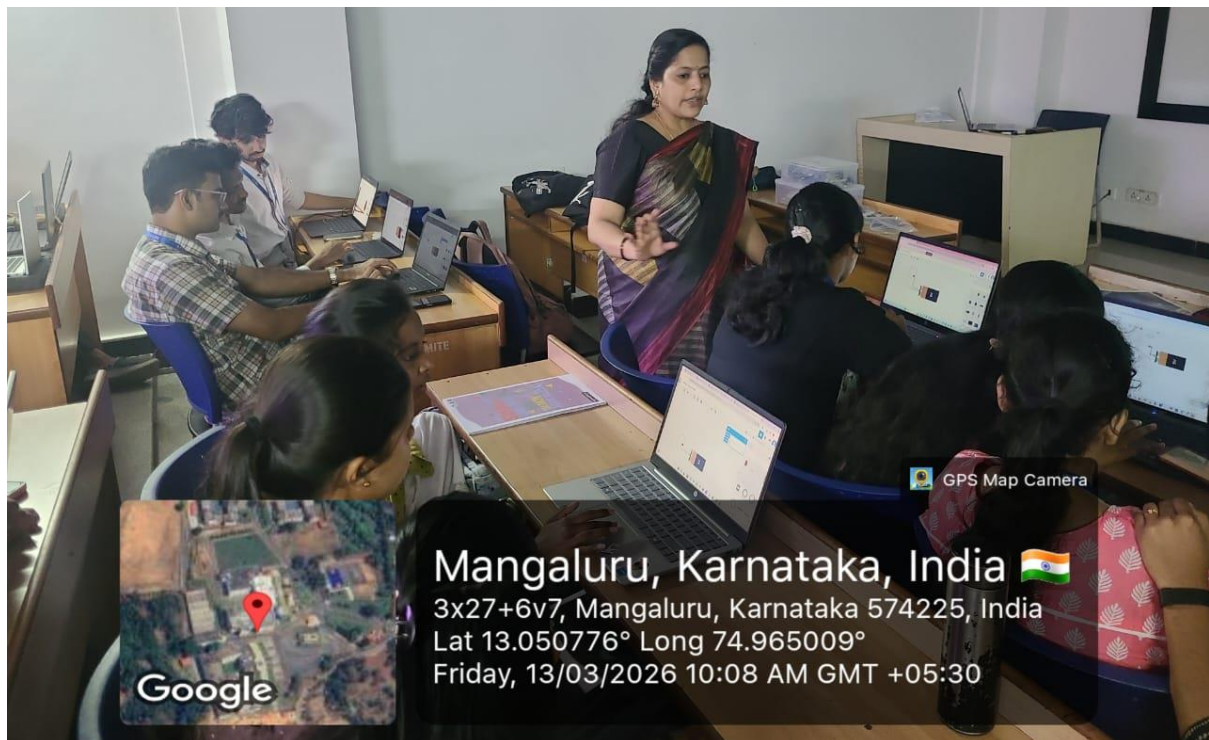
The second day featured the **Engineering Thinking Challenge**, in which the top six shortlisted teams analyzed real-world engineering problems and proposed innovative, practical, and technically feasible solutions. The finalists presented their ideas before a panel of faculty judges, who evaluated them based on innovation, problem understanding, technical feasibility, presentation skills, and overall effectiveness. The round promoted creativity, teamwork, critical thinking, communication, and structured engineering approaches.

Students participated with great enthusiasm and demonstrated exceptional creativity and technical knowledge. The competition fostered healthy technical competition, collaboration, and innovation while strengthening students' confidence in addressing real-world challenges.

ZeCoder Season 4 concluded with a feedback session and certificate distribution ceremony. The event received an overwhelmingly positive response and successfully motivated students to improve their programming and problem-solving abilities, pursue continuous learning, and prepare for future technical competitions and industry challenges.

Activity 03: Workshop on Smart IoT Prototyping using Arduino and Tinkercad

The Department of Information Science and Engineering organized a hands-on workshop titled "Smart IoT Prototyping using Arduino and Tinkercad" on 7th and 13th March 2026 for the students of 4th Semester ISE. The session was conducted by Dr. Sreeja Rajesh, Associate Professor, Department of ISE, MITE, Moodabidri, whose expertise in embedded systems and IoT brought both depth and clarity to the program. The workshop was designed to equip students with practical skills in IoT system design and circuit simulation, going beyond the theoretical concepts covered in the curriculum. The primary objectives were to introduce participants to the fundamentals of the Internet of Things, familiarize them with the Arduino microcontroller platform, and provide hands-on experience with Tinkercad, the Autodesk's free, browser-based circuit simulation tool. The session aimed to enable students to prototype and simulate IoT circuits virtually, without the need for physical hardware components.



The resource person began the workshop with an introduction to the Internet of Things (IoT), explaining its architecture, applications, and significance in areas such as healthcare, smart cities, agriculture, industrial automation, and home automation. The session then introduced the Arduino platform, where students learned about the Arduino IDE, the structure of Arduino sketches, and the basics of digital and analog input/output operations. Participants were also

introduced to Tinkercad Circuits, Autodesk's online simulation platform, which enables users to design virtual circuits, connect components, and perform real-time simulations without the need for physical hardware. Through step-by-step demonstrations, students learned to create and test IoT projects virtually, gaining practical exposure to circuit design, programming logic, and troubleshooting techniques. The resource person also explained the working principles of commonly used electronic components such as LEDs, resistors, push buttons, buzzers, sensors, and breadboards, helping participants understand their role in embedded systems and IoT applications. Interactive discussions and live demonstrations further enhanced students' understanding of how hardware and software work together to create smart and automated systems. This hands-on approach enabled participants to bridge theoretical concepts with practical implementation and develop a deeper understanding of IoT-based solutions.

The Students gained practical knowledge of Arduino, Tinkercad, and IoT prototyping through the workshop. The session concluded with an interactive Q&A and was well appreciated by the students. The workshop also encouraged students to use Autodesk's free, browser-based circuit simulation tool. The session aimed to enable students to prototype and simulate IoT circuits virtually, without the need for physical hardware components. explore innovative applications of IoT in solving real-world problems across various domains. Participants expressed keen interest in undertaking more advanced projects and further enhancing their skills in embedded systems and automation technologies. The experience provided valuable exposure to the complete process of designing, testing, and validating IoT solutions in a simulated development environment.



Students Participation in Workshops

- Entrepreneurial Thinking: K. Anujnya Shenoy and Sowjanya S. attended this IUCEE program, which focused on innovation, entrepreneurial mindset, and startup fundamentals
- Artificial Intelligence for All: Sunidhi Jogalekar attended this IUCEE program, which introduced the fundamentals and real-world applications of Artificial Intelligence.
- Design Thinking and Community-Based Design: Azmiya participated in this IUCEE workshop, learning creative problem-solving techniques and user-centric design approaches for addressing real-world challenges.
- Building Quantum Intuition with IBM Qiskit: Dhruv Shetty, Ajit Ramachandra Loni, and S. Abijit Kumar participated in this IUCEE workshop, where they gained hands-on exposure to the fundamentals of quantum computing using IBM Qiskit.
- Illuminate Entrepreneurship Bootcamp: Ahmed participated in this bootcamp organized at NMAM Institute of Technology in association with E-Cell, IIT Bombay, gaining insights into entrepreneurship, leadership, and business innovation.
- Skill Development Program: Megha Naik attended the Skill Development Program organized by Vidya Poshak, Dharwad, which emphasized communication, teamwork, leadership, and employability skills.