



MALNAD COLLEGE OF ENGINEERING

(AN AUTONOMOUS INSTITUTION UNDER VTU, BELAGAVI)

HASSAN, KARNATAKA 573202, INDIA



COMPUTER SCIENCE AND ENGINEERING

NEWSLETTER: SEPT 2025 - JAN 2026



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MESSAGE FROM HOD



DR. CHANDRIKA J
PROFESSOR AND HOD

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It's my privilege to present the newsletter for odd semester 2025. This newsletter serves to acknowledge the zeal of the department in its continued efforts towards achieving excellence through many technical events and non-technical events with enthusiastic participation of students & faculty members. It was indeed a proud moment for the department to host one-week Basic Offline FDP on “transforming technical education & research through generative AI”, sponsored by ATAL academy New Delhi. I extend my appreciation to the editorial team for neatly presenting this newsletter.

My heartfelt congratulations to all students and faculty members featured in this issue. Your achievements inspire others and contribute to the growth of our department.

Let us continue to learn, innovate, and excel together.

ABOUT THE DEPARTMENT

The Department of Computer Science & Engineering was established in 1983 and offers a Bachelor of Engineering degree in Computer Science and Engineering with an intake of 420 students. The program is designed to prepare graduates for successful, rewarding, and lifelong careers in the ever-evolving field of computing. With a focus on both theoretical foundations and practical applications, the department nurtures innovation, critical thinking, and problem-solving skills among students.



Students in the department gain strong knowledge of hardware and software through classroom learning and practical lab experience. The labs are equipped with modern hardware and software tools that help students apply concepts to real-world problems. The curriculum covers both core and emerging technologies such as machine learning, networking, cybersecurity, and software engineering.

The Department of Computer Science & Engineering is committed to developing skilled, ethical, and industry-ready engineers. With the guidance of experienced faculty, students explore new technologies through workshops, seminars, and practical learning, helping them succeed in leading organizations, research institutions, and startups worldwide. The department also encourages innovation, teamwork, and continuous learning to prepare students for the evolving digital world.



VISION AND MISSION OF THE DEPARTMENT

VISION:

- To become a leading department in the field of Computer Science & Engineering.
- To produce competent professionals with strong research and innovation skills.
- To inculcate moral values, social responsibility, and ethical practices among students.

MISSION:

- Impart world class engineering education to produce technically competent engineers.
- Provide facilities and expertise in advanced computer technology to promote research.
- Enhance Industry readiness and entrepreneurial abilities through innovative skills.
- Nurture ethical values and social responsibilities



PROGRAM OUTCOME

- **PO1: ENGINEERING KNOWLEDGE:** APPLY THE KNOWLEDGE OF MATHEMATICS, SCIENCE, ENGINEERING FUNDAMENTALS, AND AN ENGINEERING SPECIALIZATION TO THE SOLUTION OF COMPLEX ENGINEERING PROBLEMS.
- **PO2: PROBLEM ANALYSIS:** IDENTIFY, FORMULATE, REVIEW RESEARCH LITERATURE, AND ANALYZE COMPLEX ENGINEERING PROBLEMS REACHING SUBSTANTIATED CONCLUSIONS USING FIRST PRINCIPLES OF MATHEMATICS, NATURAL SCIENCES, AND ENGINEERING SCIENCES
- **PO3: DESIGN/DEVELOPMENT OF SOLUTIONS:** DESIGN SOLUTIONS FOR COMPLEX ENGINEERING PROBLEMS AND DESIGN SYSTEM COMPONENTS OR PROCESSES THAT MEET THE SPECIFIED NEEDS WITH APPROPRIATE CONSIDERATION FOR THE PUBLIC HEALTH AND SAFETY, AND THE CULTURAL, SOCIETAL, AND ENVIRONMENTAL CONSIDERATIONS.
- **PO4: CONDUCT INVESTIGATIONS OF COMPLEX PROBLEMS:** USE RESEARCH-BASED KNOWLEDGE AND RESEARCH METHODS INCLUDING DESIGN OF EXPERIMENTS, ANALYSIS AND INTERPRETATION OF DATA, AND SYNTHESIS OF THE INFORMATION TO PROVIDE VALID CONCLUSIONS.
- **PO5: MODERN TOOL USAGE:** CREATE, SELECT, AND APPLY APPROPRIATE TECHNIQUES, RESOURCES, AND MODERN ENGINEERING AND IT TOOLS INCLUDING PREDICTION AND MODELLING TO COMPLEX ENGINEERING ACTIVITIES WITH AN UNDERSTANDING OF THE LIMITATIONS.
- **PO6: THE ENGINEER AND SOCIETY:** APPLY REASONING INFORMED BY THE CONTEXTUAL KNOWLEDGE TO ASSESS SOCIETAL, HEALTH, SAFETY, LEGAL AND CULTURAL ISSUES AND THE CONSEQUENT RESPONSIBILITIES RELEVANT TO THE PROFESSIONAL ENGINEERING PRACTICE.
- **PO7: ENVIRONMENT AND SUSTAINABILITY:** UNDERSTAND THE IMPACT OF THE PROFESSIONAL ENGINEERING SOLUTIONS IN SOCIETAL AND ENVIRONMENTAL CONTEXTS, AND DEMONSTRATE THE KNOWLEDGE OF, AND NEED FOR SUSTAINABLE DEVELOPMENT.
- **PO8: ETHICS:** APPLY ETHICAL PRINCIPLES AND COMMIT TO PROFESSIONAL ETHICS AND RESPONSIBILITIES AND NORMS OF THE ENGINEERING PRACTICE.
- **PO9: INDIVIDUAL AND TEAM WORK:** FUNCTION EFFECTIVELY AS AN INDIVIDUAL, AND AS A MEMBER OR LEADER IN DIVERSE TEAMS, AND IN MULTIDISCIPLINARY SETTINGS.
- **PO10: COMMUNICATION:** COMMUNICATE EFFECTIVELY ON COMPLEX ENGINEERING ACTIVITIES WITH THE ENGINEERING COMMUNITY AND WITH SOCIETY AT LARGE, SUCH AS, BEING ABLE TO COMPREHEND AND WRITE EFFECTIVE REPORTS AND DESIGN DOCUMENTATION, MAKE EFFECTIVE PRESENTATIONS, AND GIVE AND RECEIVE CLEAR INSTRUCTIONS.
- **PO11: PROJECT MANAGEMENT AND FINANCE:** DEMONSTRATE KNOWLEDGE AND UNDERSTANDING OF THE ENGINEERING AND MANAGEMENT PRINCIPLES AND APPLY THESE TO ONE'S OWN WORK, AS A MEMBER AND LEADER IN A TEAM, TO MANAGE PROJECTS AND IN MULTIDISCIPLINARY ENVIRONMENTS
- **PO12: LIFE-LONG LEARNING:** RECOGNIZE THE NEED FOR, AND HAVE THE PREPARATION AND ABILITY TO ENGAGE IN INDEPENDENT AND LIFE-LONG LEARNING IN THE BROADEST CONTEXT OF TECHNOLOGICAL CHANGE.

SALIENT FEATURES OF DEPARTMENT

- The department has got NBA accreditation under Tier-I.
- The VTU has recognized the department as a research center for carrying out research work leading to M.Sc. Engg. & Ph.D degrees.
- State of the Art Computing Facilities.
- ICT in Teaching and Learning
- Teacher as Mentor.
- Research & Publications with Social Impact.
- Supportive Learning for Placements.
- Professional Development for Industrial Engagement
- The department is regularly organizing several seminars, workshops, Conference, FDPs and Industry institution Interaction programs to help the faculty members and students.



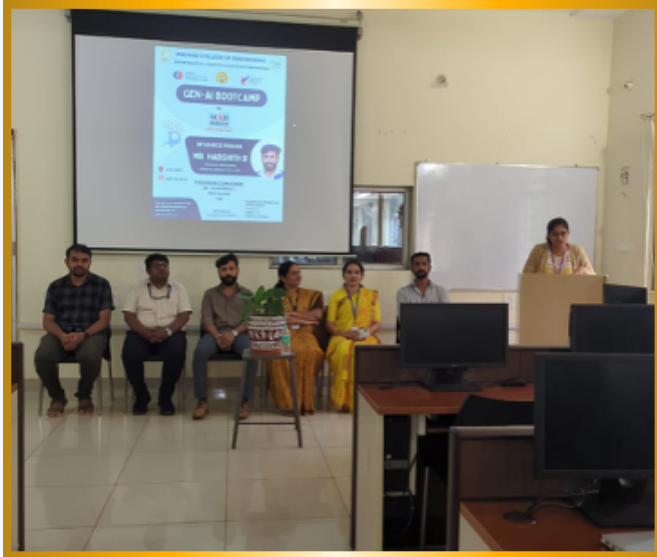
PROGRAM SPECIFIC OUTCOMES

- PSO1: To enable students, apply modern software tools and technologies in solving real-world computing problems.
- PSO2: To enable students, utilize theoretical knowledge, algorithmic thinking and software engineering practices to build efficient and scalable IT systems for real-world applications.

PROGRAM EDUCATIONAL OBJECTIVES

- PEO 1: Graduates will be efficient software developers in diverse fields and will be successful professionals and/or pursue higher studies.
- PEO 2: Graduates will be capable to adapt to new computing technology for professional excellence and Research and will be lifelong learners.
- PEO 3: Graduates will work productively exhibiting ethical qualities for the betterment of society.
- PEO 4: Graduates will possess leadership qualities, work harmoniously in a team with effective communication skills

GEN-AI BOOTCAMP NEWSLETTER



Department of Computer Science and Engineering

Malnad College of Engineering, Hassan

Speaker: Mr. Harshith D

Dates: 25th, 26th & 27th September

Venue: CSE Lab 2

Participants: 7th Semester Students

INTRODUCTION

The Department of Computer Science and Engineering organized a three-day workshop on Generative Artificial Intelligence (GEN-AI Bootcamp).

The workshop aimed to provide knowledge on Artificial Intelligence (AI), Large Language Models (LLMs), Prompt Engineering, Agentic AI, and career-building skills. The sessions were conducted by Mr. Harshith D, Developer at Unisys India Pvt. Ltd.

The bootcamp witnessed enthusiastic participation from final-year students with active engagement in hands-on activities.

INAUGURATION

The program began with an invocation followed by a plant watering ceremony symbolizing growth.

Dignitaries:

- Dr. Chandrika J (HoD, CSE)
- Mr. Harshith D (Resource Person)
- Faculty Coordinators

Dr. Chandrika J emphasized the importance of emerging technologies like Generative AI.



SYSTEMCRAFT: CREATE MINIOS USING APPROPRIATE DATA STRUCTURES



The Department of Computer Science and Engineering organized a three-day workshop on “SystemCraft: Create MiniOS using Data Structures” from 4th to 6th December 2025. The objective of the workshop was to provide students with practical exposure to operating system concepts by enabling them to design and implement a Mini Operating System.

The sessions aimed at enhancing students’ understanding of core OS functionalities such as process management, memory management, and system integration through hands-on learning. The resource persons guided participants with industry-oriented insights and step-by-step implementation, making the sessions highly interactive and effective.

DAY 1

(04/12/2025)

The first day focused on understanding the fundamentals of operating systems. Participants were introduced to key concepts such as CPU management, memory handling, and process execution. The instructors provided clear explanations along with demonstrations to help students grasp the internal working of an operating system.

Hands-on sessions were conducted to give students initial exposure to implementing basic logic, helping them build a strong foundation for further learning.



SYSTEMCRAFT: CREATE MINIOS USING APPROPRIATE DATA STRUCTURES

DAY 2

(05/12/2025)

On the second day, students explored advanced operating system concepts in greater depth. The focus was on strengthening their understanding through practical implementation and problem-solving.



Participants worked on developing different modules and understanding how various components of an operating system interact with each other. The sessions included detailed guidance and exercises, making the learning experience more engaging and application-oriented.

DAY 3

(06/12/2025)



The final day was dedicated to hands-on integration and project completion. Students combined all the modules developed during the previous sessions into a complete MiniOS system.

They worked on testing, debugging, and refining their implementations. By the end of the session, participants successfully demonstrated their MiniOS projects, showcasing their understanding of system-level concepts and practical skills.

SYSTEMCRAFT: CREATE MINIOS USING APPROPRIATE DATA STRUCTURES

CONCLUSION

The resource persons, Mr. Naveen S and Mrs. Lavanya B. N from Avinya Techknows, Bangalore, shared their industry expertise and guided students throughout the sessions, making the learning process interactive and effective. The workshop was efficiently coordinated by the faculty members, Mr. Tejonidhi M R and Mrs. Shruthi K R, whose continuous support ensured the smooth conduct of all activities, while the student coordinators also played a vital role in organizing and managing the sessions successfully. Overall, the workshop effectively bridged the gap between theoretical knowledge and real-world application, enhancing students' technical skills and preparing them for system-level development.

NEWSLETTER: 16th September 2025

URJA: IGNITING YOUNG MINDS FOR SUSTAINABLE EARTH



INTRODUCTION

The Department of Computer Science and Engineering, Malnad College of Engineering, Hassan, organized a one-day workshop Urja: Igniting Young Minds for Sustainable Earth with the objective of creating environmental awareness and promoting sustainable practices among students. The event was enriched by resource persons from sustainable engineering, environmental technology, and waste management sectors.

INAUGURATION

The workshop commenced with an invocation, creating a meaningful beginning to the program. This was followed by an address by Dr. Chandrika J, Professor & Head of the Department of CSE, who welcomed the gathering and emphasized the importance of sustainability in engineering education. The session also included the introduction of the distinguished guests and resource persons.



FORENOON SESSION

(12/09/2025)

The workshop began with student presentations on pre-assigned tasks:

1. Audit of Hassan – covering forest area, rainfall, and endangered species.
2. Audit of the College Campus – analysis of total area, rainwater harvesting, trees, and green initiatives.
3. Web Application: “Know Your Carbon Footprint” – a student-developed tool to estimate and analyze personal carbon emissions.

Interactive activities such as Match the Seed with the Tree and Identify the Birds engaged participants in biodiversity awareness. Additionally, discussions highlighted the application of Artificial Intelligence (AI) and Machine Learning (ML) in Environmental Studies (EVS), such as predicting analyzing carbon footprints.

AFTERNOON SESSION

(12/09/2025)

The post-lunch session was led by resource persons and covered practical sustainability topics:

- Solid Waste Management (SWM)
- Composting Methods
- Haritha (Green) Campus Initiatives

The speakers emphasized hands-on solutions for reducing waste, improving recycling practices, and maintaining eco-friendly institutional campuses.

OUTCOME

- Awareness of local and campus-level ecological audits.
- Introduction to AI/ML-based techniques for environmental monitoring and sustainability.
- Practical understanding of waste management and composting.
- Active student involvement through games and presentations.

CONCLUSION

The workshop successfully brought together technical insights and environmental awareness. By combining student-led audits, expert lectures, AI/ML applications, and interactive activities, the event created a holistic platform for learning and action. With around 100 attendees, it fostered a sense of responsibility toward building a greener, more sustainable future.

NEWSLETTER: 6 th to 8th April 2026

WORKSHOP ON “LATEX ESSENTIALS”

INTRODUCTION



The Department of Computer Science and Engineering, Malnad College of Engineering, organized a Workshop on “Latex Essentials” from 6th to 8th April 2026. The LaTeX Workshop was designed to introduce students to the fundamentals of LaTeX, a powerful document preparation system widely used in academia, research, and technical writing. The program was specifically targeted at third-year students, equipping them with essential documentation and formatting skills that complement their technical knowledge and prepare them for professional and academic projects.



The sessions were conducted by Mr. Madhusudhanam M R, who guided the participants through practical demonstrations and hands-on activities. His expertise in LaTeX helped students understand both the theoretical aspects and practical applications of the tool.

The program was convened by Dr. Chandrika J, ensuring smooth execution and academic alignment. The event was further coordinated by Mrs. Chandana H M, Mrs. Nivyashree R, and Mrs. Monika M M, who extended support in planning, organizing, and mentoring the students throughout the sessions.

OBJECTIVES

- To introduce participants to the fundamentals of LaTeX for professional document preparation.
- To enable students to create well-structured documents including reports, articles, and resumes.
- To develop skills in formatting text, inserting tables, figures, and managing layouts effectively.
- To provide hands-on experience in writing mathematical equations and technical content.
- To familiarize participants with citations, references, and bibliography management.

KEY TOPICS COVERED

1. Introduction to LaTeX – Understanding LaTeX as a document preparation system focusing on content rather than formatting.
2. Why LaTeX? – Advantages over traditional word processors, especially for mathematical and technical writing.
3. Basic Structure of a LaTeX Document – Preamble, document body, sections, and references.
4. Features of LaTeX – Text formatting, lists, mathematics, tables, images, packages, and bibliography styles.
5. Applications of LaTeX – Research papers, project reports, theses, resumes, and presentations using Beamer.
6. Advantages of LaTeX – Professional-quality output, efficiency in handling large documents, and suitability for technical content.
7. Limitations of LaTeX – Steep learning curve and command-based usage.



CONCLUSION

The workshop successfully demonstrated the power and versatility of LaTeX in academic and professional contexts. Participants gained practical knowledge of document creation, formatting, and referencing. While LaTeX requires practice to master, it remains an invaluable tool for producing structured, professional, and technically rich documents.

