DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VOL. 13 ISSUE 2 JULY - DEC 2025

SRUSHTI newsletter

BIO-INNOVATORS SECOND PRIZE

Inside This Issue

CANARA ENGINEERING COLLEGE

An Autonomous Institution, Under **VTU,** Belagavi and Recognized by **AICTE**, Accredited by **NBA**(CS&E, IS&E, EC&E) and **NAAC** with **A** Grade

Sudhindra Nagara, Benjanapadavu, Mangaluru - 574219, Karnataka

EDITORIAL

STUDENT MEMBERS

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Gurudev Krishnanand Kini
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Abheeshta P
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To be recognized as a center of knowledge dissemination in Computer Science and Engineering by imparting value-added education to transform budding minds into competent computer professionals.

- Provide a value-based learning environment enriched with ethics, honesty and integrity that equips students to cater to the needs of society and industry.
- Augment the knowledge of students towards cutting-edge technologies and state-of-the-art tools of Computer Science & Engineering.
- Create opportunities for all-round development of students through co-curricular and extra-curricular activities.
- Promote research, innovation and development activities in the field of Computer Science among staff and students without any bias.

DEPARTMENT PROFILE

The department was started in the year 2001 to offer undergraduate degree programme i.e Bachelor of Engineering (BE) in Computer Science & Engineering (CS&E). The department has dedicated, qualified and experienced faculty members to guide the students in academics. The faculty members are actively involved in teaching, product development and research. The faculty members have published number of research and review papers/articles in referred International journals and reputed International conferences which are archived at IEEE/ACM/Springer and other renowned digital libraries.

The department frequently organizes training programmes for the faculty, technical staff and students. The faculty frequently attends staff development programmes (SDP/FDP/Seminar) to update themselves in technological advancements and conferences to present research findings.The department aims at building the students' career by placing special emphasis on all-round development through continuous interaction with Industry.

Interactive sessions with experts from academia, research laboratories and industry are constantly held so as to enable students to gain knowledge on diverse and emerging fields. The campus placement has been scaling higher and higher peaks right from its inception with multinational companies recruiting students in large numbers. To increase the opportunity of placements to students, the department conducts soft skills training programmes, technical skill development activities and initiatives on self-learning (Spoken Tutorial programmes by IIT Bombay).

The department promotes extracurricular activities under the umbrella of the students' association & SPECS. The department brings out Annual technical magazine and newsletter which provides an opportunity for the students and staff to publish innovative ideas, programming tips and articles on current trends in computing and technology. The students'association and National Service Scheme (NSS) wing frequently conducts various programmes to strengthen leadership skills, teamwork and communication; and awareness on protection of environment and social responsibilities.

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

- Graduates will work productively as computer science engineers exhibiting ethical qualities and leadership roles in multi-disciplinary teams.
- Graduates will adapt to the changing technologies, tools and societal requirements.
- Graduates will design and deploy software that meets the needs of individuals and the industries.
- Graduates will take up higher education and/or be associated with the field so that they can keep themselves abreast of Research & Development.

PROGRAMME OUTCOMES (PO)

Engineering graduates in Computer Science and Engineering will be able to:

Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

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.

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.

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.

Modern tool usage: Select/Create and apply appropriate techniques, resources and modern engineering and IT tools, including prediction and modelling to complex engineering activities, taking comprehensive cognizance of their limitations.

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.

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.

Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the relevant scientific and/or engineering practices.

Individual and team work: Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.

Communication: Communicate effectively on complex engineering activities with the engineering community and with the 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.

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.

Life-long learning: Recognize the need for and above have the preparation and ability to engage in independent and life-long learning in the broadcast context of technological changes.

PROGRAMME SPECIFIC OUTCOMES (PSO)

Computer System Components: Apply the principles of computer system software engineering to design, develop and deploy computer subsystems.

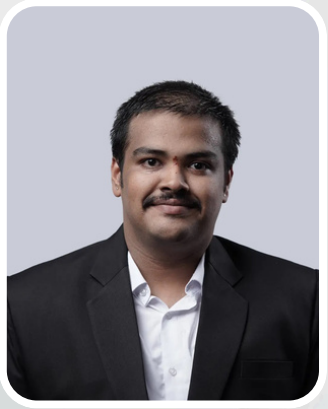
Intelligent Internet Applications: Apply the knowledge of data storage, analytics and internet architecture in designing Internet based application.

HoD'S MESSAGE

Dr. Karthik Pai B H

Professor & HoD

I express my sincere gratitude to the Principal of CEC Dr. Nagesh H R, for his continuous support and encouragement to the Department of Computer Science and Engineering (CS&E).On behalf of the entire department, I present this newsletter Volume 13, Issue 2.The major strength of the CS&E department is a team of well qualified and dedicated faculty, who are continuously supporting the students for their academic excellence, cultural activities, co-curricular activities and sports. The future graduates of our department are ready to serve the industry and the nation. I am sure, this newsletter will act as a bridge between our students, faculty members, alumni and other educational institutions to reciprocate information and ideas for shaping our future journey. I sincerely thank all the faculty and staff members of the department and the students for their contributions to bring this newsletter to life.



EDITOR'S MESSAGE

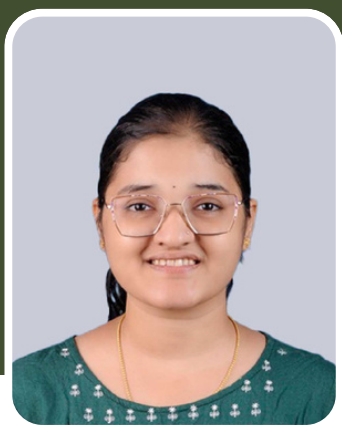
Adithya M

Assistant Professor

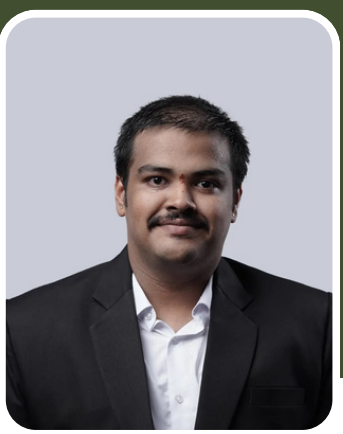
It gives me immense pleasure that I was given the opportunity to prepare the Volume 13 Issue 2 of the CS&E Department Newsletter. As we all know, a newsletter mirrors a department's vision and mission. It also highlights events, activities and academic progress and achievements of both faculty and students. I hope that the newsletter encourages students to participate in Co-curricular and Extracurricular activities organized by our college and other institutions. Also the newsletter acts as a platform to motivate faculty members to publish research papers, take up online courses and participate in Faculty Development Programmes (FDPs) to improve their technical skills.

New FACES of CS&E Family

Ravikumar D Kodadal
Assistant Professor



Bhavana D
Assistant Professor



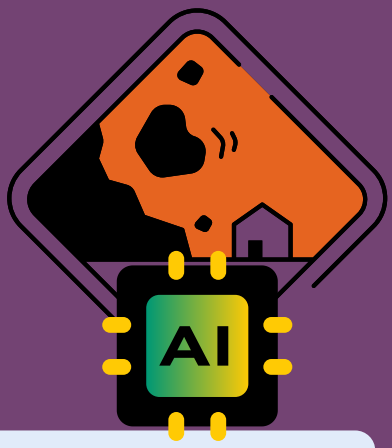
Adithya M
Assistant Professor

STAFF ACHIEVEMENTS

BEST PAPER AWARD SECURED AT IEEE INSPIRE 2025 CONFERENCE

At the IEEE INSPIRE 2025 Conference (Intelligent Systems for Pioneering Innovation in Robotics and Electric Mobility) held at Mangalore Institute of Technology & Engineering (MITE), Dr. Nagesh H R received the Best Paper Award for his outstanding research paper titled "**Structurization of Unstructured Data using Triplet Extraction and Text Refinement**." The paper was widely appreciated for its innovative approach to transforming unstructured textual data into structured, meaningful representations, contributing significantly to advancements in intelligent data processing and artificial intelligence research.

INTERNATIONAL RECOGNITION FOR AI-DRIVEN DISASTER RISK RESEARCH



Babitha Ganesh Kulal received the Best Conference Full Paper Award at the **16th International Student Conference on Applied Computing**, **held at the College of Technological Innovation, Zayed University, Dubai**, in collaboration with the **IEEE UAE Chapter**, on September 24–25, 2025. The conference proceedings were published by IEEE and are indexed in Scopus. Her participation in the conference was supported by the **IEEE GRSS IDEA Professional Development Microgrant**, which aims to support professional development and international research dissemination.

WORKSHOP / WEBINAR ATTENDED

Dr. Rakshith M D attended an 11-day National-level Faculty Development Program on "**A Hands-on Approach in Deep Learning, LLMs, and Prompt Engineering**", organized by Indian Institute of Information Technology, Nagpur in collaboration with Electronics and ICT Academy, held online from 14th to 25th July 2025.

Dr. Rakshith M D attended a 5-day National-level Faculty Development Program titled "**Beyond the Horizon: Unlocking Artificial Intelligence for Transformative Learning**", organized by Presidency University, Bengaluru, conducted online from 28th July to 1st August 2025.

Annapurna M attended a 1-day National-level Faculty Development Program on "**LaTeX**", organized by ACS College of Engineering, conducted online on 25th July 2025.

Sukshma Shetty attended a 5-day National-level Faculty Development Program titled "**Effective Research Proposal Writing: Turning Research Ideas into Funded Projects**", organized by ProMind Research Academy, Erode, conducted online from 30th June to 4th July 2025.

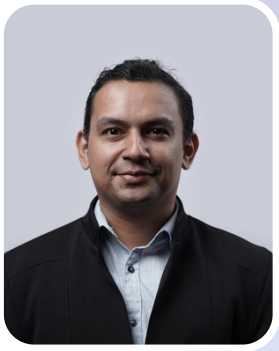
Sukshma Shetty attended a 6-day National-level Faculty Development Program on "**Deep Learning, Gen AI, and their Applications in Agriculture**", organized by the Department of Computer Science and Engineering, Tezpur University, in association with Pantech e-Learning, conducted online from 11th to 18th September 2025.

Ajay S Shet attended a 5-day National-level Faculty Development Program on "**Cybersecurity Intelligence**", organized by the Department of Computer Science and Engineering, Canara Engineering College, Mangaluru, held offline from 15th to 19th September 2025.

Bhavana D attended a 1-day National-level Faculty Development Program titled "**Innovation Design Thinking and Project-Based Learning**", organized by Visvesvaraya Technological University, Belagavi, at Yenepoya Institute of Technology, Moodbidri, held offline on 8th September 2025.

Bhavana D attended a 5-day National-level Faculty Development Program on "**Cybersecurity Intelligence**", organized by the Department of Computer Science and Engineering, Canara Engineering College, Mangaluru, held offline from 15th to 19th September 2025.

Janardhana Bhat K attended a 5-day National-level Faculty Development Program on "**Cybersecurity Intelligence**", organized by the Department of Computer Science and Engineering, Canara Engineering College, Mangaluru, held offline from 15th to 19th September 2025.



Shatananda Bhat P attended a 5-day National-level Faculty Development Program titled "**Trends in Next Generation Wireless Network using Simulation Tools**", organized by the Department of Computer and Communication Engineering in association with IQAC, NMAM Institute of Technology, Nitte, held offline from 1st to 5th December 2025.

Shatananda Bhat P attended a 16-day National-level Faculty Development Program on "**Next-Gen Cybersecurity: Trends and Technologies**", organized by E & ICT Academy, IIT Kanpur, conducted online from 18th August to 2nd September 2025.

Aditya M attended a 5-day National-level Faculty Development Program on "**Cybersecurity Intelligence**", organized by the Department of Computer Science and Engineering, Canara Engineering College, Mangaluru, held offline from 15th to 19th September 2025.

Ravikumar D Kodadal completed a 12-week National-level Faculty Development Program on "**Digital Image Processing**", offered by NPTEL–AICTE, conducted online.

PUBLICATIONS AND RESEARCH CONTRIBUTIONS

(PAPERS PUBLISHED / PRESENTED IN JOURNALS, BOOK CHAPTERS & CONFERENCES)

2025 SRC – 16th Student Research Conference on Applied Computing, Zayed University, Dubai (IEEE, Scopus Indexed)

Babitha Ganesh Kulal published a research paper titled "**Smart AI for Landslide Risk Reduction: An XGBoost Bagging Model for a Safer Tomorrow**" at the 2025 16th Student Research Conference on Applied Computing (SRC), held at Zayed University, Dubai. The conference proceedings were published by IEEE and are indexed in Scopus.

2025 AICDMB – Annual International Conference on Data Science, Machine Learning and Blockchain Technology, VVCE, Mysore

Babitha Ganesh Kulal published a research paper titled "**Generative AI Powered Modern Education Tool to Enhance Teaching Learning Experience**" at the 2025 Annual International Conference on Data Science, Machine Learning and Blockchain Technology (AICDMB) organized at Vidyavardhaka College of Engineering (VVCE), Mysore. The conference proceedings were published by IEEE and are indexed in Scopus.

International Journal of Information Technology – Springer (Scopus Indexed)

Dr. Vinay P published a research paper titled "**CNN-GKO-YOLOv4: An Optimized Neural Network Framework for Dynamic Traffic Sign Recognition**" in the International Journal of Information Technology, published by Springer. The journal is indexed in Scopus.

Knowledge and Information Systems – Springer (Web of Science Indexed)

Dr. Vinay P published a research paper titled "**An Efficient Node Embedding Approach via Adaptive Graph Recurrent Autoencoder with Attention Procedures**" in the Knowledge and Information Systems journal, published by Springer and indexed in Web of Science (WoS).

NMITCON – Third International Conference on Networks, Multimedia and Information Technology (IEEE, Scopus Indexed)

Saritha Suvarna published a research paper titled "**Predictive Analytics for Chronic Disease: A Machine Learning Approach**" at the Third International Conference on Networks, Multimedia and Information Technology (NMITCON). The conference proceedings were published by IEEE and are indexed in Scopus.

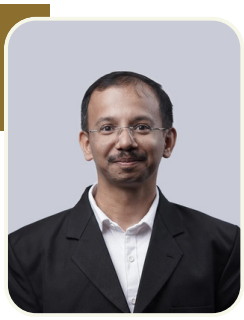
2025 PICC – International Conference on Power, Instrumentation, Control and Computing (IEEE, Scopus Indexed)

Saritha M published a research paper titled "**Design and Deployment of an On-Premise Multimodal AI Chat System Using Quantized LLMs for CPU and GPU Architectures**" at the 2025 International Conference on Power, Instrumentation, Control, and Computing (PICC). The conference proceedings were published by IEEE and are indexed in Scopus.

2025 ICRITO – International Conference on Reliability, Infocom Technologies and Optimization (IEEE)

Saritha M published a research paper titled "**SYNCHRON AI: Predicting Academic Outcomes with Interpretable Machine Learning and Course Engagement System: A University Case Study**" at the 2025 12th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO). The conference proceedings were published by IEEE.

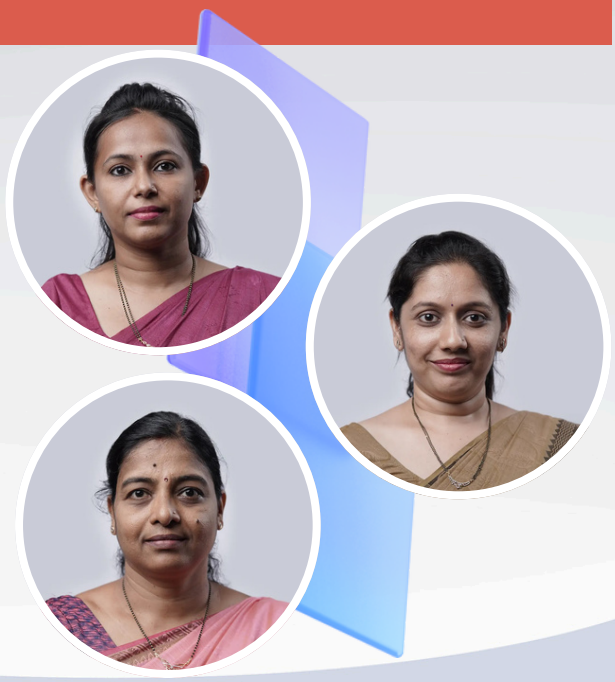
International Journal of Computational Vision and Robotics – Inderscience (Scopus Indexed)



Dr. Rakshith M D published a research paper titled "**Effect of Layers on CNN Model Accuracy for Facial Emotion Recognition**" in the International Journal of Computational Vision and Robotics, published by Inderscience and indexed in Scopus.

2025 ICRAIS – International Conference on Recent Advances in Information Technology for Sustainable Development (IEEE, Scopus Indexed)

Sushma Vittal, Babitha Ganesh Kulal and Aruna Kumari G K published a research paper titled "**Avatar Closet: An Augmented Reality Based Multi-Modal Virtual Try-On System for Fashion Retail**" at the 2025 3rd International Conference on Recent Advances in Information Technology for Sustainable Development (ICRAIS). The conference proceedings were published by IEEE and are indexed in Scopus.



2025 ICRAIS – International Conference on Recent Advances in Information Technology for Sustainable Development (IEEE, Scopus Indexed)

Sukshma Shetty published a research paper titled "**A Unified Computer Vision System for Multilingual Bidirectional Gesture Recognition: ASL and ISL**" at the 2025 3rd International Conference on Recent Advances in Information Technology for Sustainable Development (ICRAIS). The conference proceedings were published by IEEE and are indexed in Scopus.

2025 SRC – 16th Student Research Conference on Applied Computing, Zayed University, Dubai (IEEE, Scopus Indexed)

Janardhana Bhat K published a research paper titled "**Smart AI for Landslide Risk Reduction: An XGBoost Bagging Model for a Safer Tomorrow**" at the 2025 16th Student Research Conference on Applied Computing (SRC) held at Zayed University, Dubai. The conference proceedings were published by IEEE and are indexed in Scopus.

Shaping Intelligence for a Digital Future

In an era driven by data and intelligent systems, innovation is no longer optional—it is essential. The achievements featured in this newsletter reflect how students and faculty are actively engaging with emerging technologies such as artificial intelligence, data science, and intelligent computing. Through research, competitions, publications, and real-world problem solving, these accomplishments highlight a culture of curiosity, adaptability, and forward thinking. Together, they represent steady progress toward building solutions that are not only technologically advanced, but also meaningful and impactful.

STUDENT ACHIEVEMENTS

HACKATHONS | PATENTS PUBLISHED | NPTEL CERTIFICATIONS

Team Bio-Innovators Achieves Second Prize at AINNOVATION-II 2025

Team Bio-Innovators—Ananya G. Bhat and Lakshmish Prabhu of the Department of Computer Science & Engineering along with Prateek Prakash Kirti and Sujan Kumar Shetty of the Department of Artificial Intelligence & Machine Learning represented Canara Engineering College by securing the Second Prize (₹25,000) at the AINNOVATION-II 2025 Hackathon, organized by Microsoft and Kyndryl, and hosted at NMAMIT, Nitte. The team competed among over 1,000 teams, emerging as the second-best team at the event. The team developed an innovative solution under the bio-innovation theme, demonstrating strong technical expertise and practical problem-solving skills. The achievement highlights the team's capability in applying emerging technologies to address real-world challenges

Best Project Award for Team Codenares at Nexathon 2025

Team Codenares—Lakshmish Prabhu, Priyanka Vishram Gaonkar, Prathamesh Prabhu, and Moolya Praveeksha Narayan of Canara Engineering College won the Best Project Award (Open Theme) at Nexathon 2025, held at Shree Devi Institute of Technology, Mangaluru, on 28–29 October 2025. The team developed an innovative blockchain-based evidence locker that integrates blockchain technology, IPFS, and AI-driven detection to ensure data integrity and security. For their project, the team was awarded a cash prize of ₹2,000.

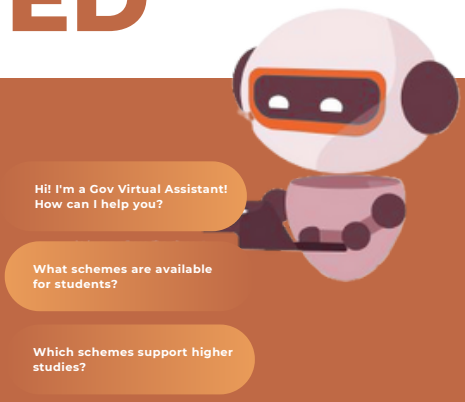
Team Codecrafters Secures Appreciation Award at Udbhava 2025

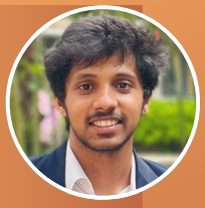
Team Codecrafters—Nikesh from the Department of Computer Science and Engineering along with Puneeth, Srujan D. S and Suhan from the Department of Artificial Intelligence & Machine Learning of Canara Engineering College, won the Appreciation Award along with a cash prize of ₹2,000 at the Udbhava 2025 Hackathon, held at the Nitte Institute of Professional Education (NIPE), Mangaluru, on 7–8 October 2025.

The team developed an innovative multilingual platform for cyber scam awareness, fraud reporting and AI-based phishing detection, which stood out among 45 participating teams and advanced to the top 12 finalists after multiple mentoring and evaluation rounds.

PATENTS PUBLISHED

Dr. Nagesh H R
Principal, CEC





Abhiyan: AI-powered Assistant for Government Schemes

An intelligent information assistant designed to simplify access to government schemes has been developed by Mr. Prajwal V Naik, Mr. Ramesh P Prabhu, Ms. Sania Shetty, and Ms. Shilpa V. Guided by Dr. Nagesh H R, Principal, CEC, the project titled Abhiyan harnesses AI to provide users with personalized, efficient, & accessible information about relevant schemes, empowering citizens through digital innovation.

Ajay S Shet
Assistant Professor

Emergency Response Ambulance Alert System

A smart alert system to support faster emergency response during ambulance transit has been developed by Ms. Sivali Rao P, Mr. Vikas N Vaidya, Ms. Srushti Rajendra Naik, and Mr. Vikhyath N Rao. Guided by Ajay S Shet, Assistant Professor, Dept. of CSE, the project introduces a tech-driven solution aimed at minimizing delays and ensuring timely assistance in critical situations through intelligent alerts and real-time coordination.

Dr. Rajgopal K T
Associate Professor

Sustainable Agricultural Intelligence System

A multimodal system combining disease detection, IoT-driven crop monitoring, and expert advisory support has been developed by Mr. Sakshath Rai K, Ms. Vismitha T G, Ms. Devika Santhosh Rai and Ms. U. Chaithra Nayak. Guided by Dr. Rajgopal K T, Associate Professor, Dept. of CSE, the project aims to promote smart and sustainable agriculture through integrated technologies that support timely decision-making and optimized growth conditions.

Sukshma Shetty
Assistant Professor

Hand Gesture Recognition to Text Conversion Using Deep Learning

An intelligent deep learning–based system for real-time hand gesture recognition and text conversion has been developed by Subhiksha, Shridevi, Sanya Pateel and Sruthi K. S. Guided by Sukshma Shetty, the invention accurately interprets hand gestures from video inputs and converts them into meaningful text, supporting applications in sign language interpretation, assistive communication and gesture-based human–computer interaction. The system offers a scalable and user-independent solution, contributing to improved accessibility and inclusive digital interaction.

Sushma
Assistant Professor

Digital Wardrobe System with Avatar-Based Augmented Reality Outfit Projection

An immersive digital wardrobe system integrating biometric avatar creation and augmented reality outfit visualization has been developed by Swati Ganesh Shet, Vasudeva, Guruprasad Vishnu Bhat and Sneha Shantaram Shanbhag. Guided by Sushma, the invention enables users to visualize clothing on a personalized digital avatar in real time, incorporating realistic fabric physics and motion synchronization. The system enhances outfit selection accuracy and introduces a smart, interactive approach to wardrobe management and virtual apparel experiences

NPTEL COURSES

Programming in Java

Nithin Narayan Bhat successfully completed the NPTEL course on “Programming in Java,” a 12-week program conducted from July to October 2025, securing a consolidated score of 68% (Elite).

Elite

Problem Solving through Programming in C

Vaishnavi V. M successfully completed the NPTEL course on “Problem Solving through Programming in C,” a 12-week program conducted from July to October 2025, securing a consolidated score of 55%.

Cloud Computing

Thrisha successfully completed the NPTEL course on “Cloud Computing,” a 12-week program conducted from July to October 2025, securing a consolidated score of 62% (Elite).

Elite

Elite

Cloud Computing

V. Avani successfully completed the NPTEL course on “Cloud Computing,” a 12-week program conducted from July to October 2025, securing a consolidated score of 63% (Elite).

Computer Graphics

Sidharth Thoduvail successfully completed the NPTEL course on “Computer Graphics,” a 12-week program conducted from July to October 2025, securing a consolidated score of 63% (Elite).

Elite

Cloud Computing

Amulya successfully completed the NPTEL course on “Cloud Computing,” a 12-week program conducted from July to October 2025, securing a consolidated score of 55%.

Database Management System

Himanshu S successfully completed the NPTEL course on “Database Management System,” an 8-week program conducted from July to September 2025, securing a consolidated score of 64% (Elite).

Elite

Database Management System

Anujna K successfully completed the NPTEL course on “Database Management System,” an 8-week program conducted from July to September 2025, securing a consolidated score of 56%.

Programming in Java

Nandana M Karigar successfully completed the NPTEL course on “Programming in Java,” a 12-week program conducted from July to October 2025, securing a consolidated score of 71% (Elite).

Elite

Database Management System

Shiva Kumar successfully completed the NPTEL course on “Database Management System,” an 8-week program conducted from July to September 2025, securing a consolidated score of 50%.

Programming in Java

Harisha Ganeshappa Mudigoudar successfully completed the NPTEL course on “Programming in Java,” a 12-week program conducted from July to October 2025, securing a consolidated score of 63% (Elite).

Programming in Java

Shashank Hegde successfully completed the NPTEL course on “Programming in Java,” a 12-week program conducted from July to October 2025, securing a consolidated score of 83% (Elite + Silver).

Data Structures and Algorithms using Java

Sairaj Somashekhar Borkar also successfully completed the NPTEL course on “Data Structures and Algorithms using Java,” a 12-week program conducted from July to October 2025, securing a consolidated score of 52%.

Data Science for Engineers

Bhuvan R successfully completed the NPTEL course on “Data Science for Engineers,” an 8-week program conducted from July to September 2025, securing a consolidated score of 45%.

Programming in Java

Sairaj Somashekhar Borkar successfully completed the NPTEL course on “Programming in Java,” a 12-week program conducted from July to October 2025, securing a consolidated score of 84% (Elite + Silver).

Programming in Java

Karthik Kumar successfully completed the NPTEL course on “Programming in Java,” a 12-week program conducted from July to October 2025, securing a consolidated score of 80% (Elite + Silver).

Programming in Java

Prema Naik successfully completed the NPTEL course on “Programming in Java,” a 12-week program conducted from July to October 2025, securing a consolidated score of 65% (Elite).

GOLD MEDAL @ VTU State-Level Weightlifting Competition

Shravya V. Shetty of the Department of Computer Science and Engineering secured the Gold Medal in the VTU State-Level Weightlifting Competition in the 77 kg category, held at Global Academy of Technology, Bengaluru, on 27 and 28 October.

WORKSHOP/ SOCIAL ACTIVITY/ SEMINAR CONDUCTED

Problem Solving using Java Bootcamp

The Department of Computer Science and Engineering organized technical training program titled “Problem Solving using Java Bootcamp” for 5th semester students on 5th, 12th, and 26th November 2025. The sessions were conducted as Series-1, Series-2, and Series-3, aiming to strengthen students’ understanding of Java programming concepts and problem-solving skills relevant to academics and placements.

All three sessions were handled by Dr. Abhishek S Rao, Associate Professor, Department of Information Science and Engineering, who served as the resource person. The bootcamp began with Series-1, which focused on Java fundamentals such as data types, classes and objects, and an introduction to the four pillars of Object-Oriented Programming—encapsulation, polymorphism, inheritance, and abstraction—with illustrative examples. The session also covered different types of constructors and their importance.

In Series-2, advanced object-oriented concepts were discussed in detail, including polymorphism, inheritance, abstract classes, interfaces, the super keyword, and dynamic method dispatch. The resource person solved

practice problems and common placement interview questions, helping students gain clarity on real-world application of inheritance and polymorphism concepts.

The final session, Series-3, focused on exception handling, the final keyword, wrapper classes and their benefits, as well as autoboxing and unboxing, all explained with suitable examples. Practice problems and placement-oriented interview questions related to these topics were also discussed.

The entire bootcamp was coordinated by Dr. Rakshith M D. Students participated enthusiastically across the three sessions. The bootcamp was well received and proved beneficial in enhancing students Java programming proficiency and interview readiness.

MERN Stack Bootcamp: MongoDB, Express, React and Node.js

The Department of Computer Science and Engineering organized a Five-Day Student Development Programmefor 4th semester students of CSE and ISE on " MERN Stack Bootcamp: MongoDB, Express, React and Node.js " at Canara Engineering College from 22nd to 28th july 2025.

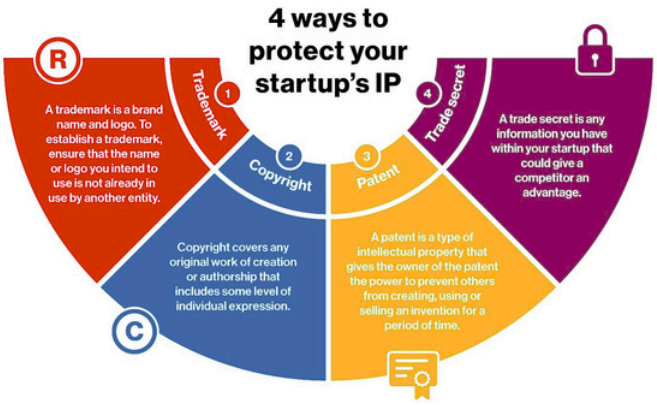
The program featured resource person Mr. Havyas A M , Trainee Software Engineer, Novigo Solutions Pvt Ltd Mangalore.

The five-day SDP saw the participation of 34 students. The session provided a comprehensive introduction to modern full-stack development by covering Node.js fundamentals through REPL and CLI, along with an in-depth understanding of Node modules and NPM packages. Participants learned the difference between synchronous and asynchronous functions and how to use them effectively in real-world applications. The session also included hands-on training on server creation using Express, implementation of middleware, API structure design, and development of REST APIs. Learners gained practical experience in testing APIs using Postman and were introduced to version control through the basics of GitHub and essential Git commands for project management and collaboration.

In addition, the session focused on database integration and frontend development by guiding participants through MongoDB Atlas setup and schema creation using Mongoose. Students explored React by learning installation procedures, file structure, and core concepts such as props, hooks, data mapping, and routing. The program concluded with a live demonstration on deploying and hosting a website using Vercel, giving learners end-to-end exposure from backend development to frontend deployment in a real-world environment.

The event was coordinated by Ms. Saritha Suvarna under the leadership of Dr. Karthik Pai B H, HoD, Department of CSE.

A Session on Protecting Intellectual Property Rights and IP Management for startups



On 13th August 2025, the Department of Computer Science and Engineering in association with IPR cell of Research and Development organized a "Session on Protecting Intellectual Property Rights and IP Management for startups" for 5th semester CS&E students. The session focused on the importance of Intellectual Property (IP) for startups, explained different types of IP, such as patents, trademarks, copyrights, and trade secrets, Startups were advised to protect their innovations early to avoid legal issues, Case studies showed how strong IP protection helped startups attract investors. Dr. Udaya Kumar K Shenoy, Dean R&D and Dr. Dhananjaya G. M, Associate Professor, AIML Department was the resource person, Dr. Vinay P coordinated the event. About 120 students attended the session.

Data Dive: The SQL Bootcamp

The Department of Computer Science and Engineering organized technical training program titled “Data Dive: The SQL Bootcamp” for 5th semester students on 3rd, 17th, and 24th September 2025, conducted as Series-1, Series-2, and Series-3. The bootcamp aimed to provide students with strong foundational and practical knowledge of database design and SQL query operations.

The Series-1 session focused on the design of databases, emphasizing the need for entity relationships, types of keys and their usage, cardinality ratios, and the creation of a library database. The session was handled by Mrs. Saritha M, Assistant Professor, Department of CS&E.

In Series-2, students were guided through the creation of a library database using a given schema, followed by hands-on discussions on writing SQL queries to retrieve different types of information. The session was conducted by Mrs. Saritha M, Mrs. Verdine Noronha, and Mr. Kishor S, Assistant Professors, Department of CS&E.

The final session, Series-3, covered managing and retrieving data using basic query operations and aggregate functions with examples, enabling students to understand data manipulation and analysis using SQL. The resource persons for this session were Mrs. Saritha M and Mrs. Verdine Noronha, Assistant Professors, Department of CS&E.

All three sessions were coordinated by Dr. Rakshith M D. The bootcamp witnessed active student participation across all sessions and was well received for its structured approach and practical orientation.

IoT Mini-Project Exhibition 2025

On 19th November 2025, the Technical Activity Cell in association with the Department of Computer Science & Engineering organized a "Innovation Showcase: IoT Mini-Project Exhibition–2025" for the final-year students. The event was held in the following labs: CSL-01, CSL-03 & CSL-04 from 01:30 p.m. to 4:00 p.m.

The IoT mini projects were judged by Dr. Dhananjaya G M, Associate Professor, Dept. of AI&ML, Dr. Abhishek S. Rao, Associate Professor, Dept. of IS&E, and Dr. Ganesh Pai, Associate Professor, Dept. of AI&ML. Dr. Karthik Pai B H, HoD, Dept. of CS&E was present during the event.

The event was coordinated by Dr. Rakshith M D, Dr. Gurudeva S Hiremath and Mrs. Sushma witnessed the active participation of around 42 student project teams.

Student Enablement Program Problem Solving Bootcamp

The Department of Computer Science and Engineering in association with Coding Club at Canara Engineering College organized a session on Student Enablement Program: Problem Solving Bootcamp Series (1-5) for third semester CSE students in their respective class rooms on 24-09-2025,15-10-2025,29-10-2025,5-11-2025 and 26-11-2025 by Ms. Abheeshta P, Mr. Bangera Paveen Sudhakar, Mr. Hejamadi Sumith Shenoy of 7th semester, Deparmtent of CSE. Ms. Bhavana D, Mr. Ajay S. Shet, and Mr. Kishor S. Assistant Professors, Department of CSE. The Resource Persons led hands on session on Problem Solving with Operators and Conditionals, different problems on patterns by using the concepts of loops,functions, recursion and its application, strings and hashing.

The program equips learners with strong problem-solving skills by enabling them to use operators and conditional statements to control program flow and solve decision-based problems effectively. Participants gain hands-on experience with loops to generate and solve a variety of pattern-based problems, strengthening their logical thinking and coding proficiency. The curriculum also emphasizes the use of functions and recursion to develop structured, modular, and reusable code for efficient software development. In addition, learners perform essential string operations such as searching, comparison, and manipulation, which are crucial for real-world applications. The program further introduces hashing techniques to enhance efficiency in searching, counting, and organizing data, preparing students for advanced programming challenges and optimized solution design.

A Session on Financial Education and Awareness

The Financial Education and Awareness Session was organized by the Departments of Computer Science and Engineering (CS&E), Information Science and Engineering (IS&E), and Computer Science and Business Systems (CS&BS) at Canara Engineering College with the objective of enhancing financial literacy among faculty members. The session focused on key concepts related to personal finance, investment strategies, behavioral finance, and economic decision-making, aiming to help participants understand how emotions and cognitive biases influence financial choices while equipping them with practical strategies for wealth management and long-term financial well-being.

A total of 75 teaching and non-teaching staff members actively participated in the session. The program was inaugurated in the presence of Dr. Nagesh H. R., Principal of Canara Engineering College. The resource person for the event was Dr. Balaji Rao D. G., Co-founder and Director of OSAT Knowledge Pvt. Ltd., a Chartered Financial Analyst with extensive expertise in behavioral finance, investment strategy, and capital markets. Dr. Balaji Rao has been associated with several financial literacy initiatives and regularly mentors educational institutions and organizations on economic decision-making and wealth creation.

The event was planned and initiated by Mr. Ravish Balakrishnan, Executive Director, Lifetime Asset Strategies Pvt. Ltd., in collaboration with Dr. Karthik Pai B. H., Professor and Head, Department of Computer Science & Engineering. The session

was coordinated by Mr. Janardhana Bhat K., Assistant Professor, Department of CSE, Mr. Sandeep M. Kini, Assistant Professor, Department of ISE, and Mr. Yatheesha K., Assistant Professor, Department of CSBS. The smooth conduct of the event was effectively guided by Dr. Karthik Pai B. H., Professor and Head, CSE, Dr. H. Manoj T. Gadiyar, Professor and Head, ISE, and Dr. Rajgopal K. T., Associate Professor and Head, CSBS.

The session was hosted by Ms. Sourabha S. Rai, Assistant Professor, Department of Computer Science & Design (CSD), who ensured a seamless flow of the program with clarity and grace.Overall, the session successfully promoted financial awareness and encouraged informed and responsible financial decision-making among faculty members.

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