

Shell Newsletter

Department of
Computer Science & Engineering



Volume 10

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Vision and Mission of the Institute

To be one of the premier institutions of Engineering and Management education through excellence in academics, research, innovation and entrepreneurship with global standards.

MISSION

To impart world class value-based education in Engineering and Management.

To establish centres of excellence in sustainable technologies by collaborating with industries to carry out interdisciplinary research and innovation activities.

To generate highly skilled and competent manpower with societal concerns and ethical standards.

Vision and Mission of the Department

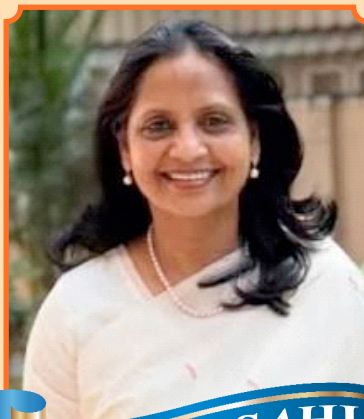
Vision

- To be a premier department for education in Computer Science & Engineering through excellence in academics, research, innovation and entrepreneurship.

Mission

- A learning environment that promotes academic excellence by delivering comprehensive curriculum as per the industry requirements and encourage higher learning.
- Cultivate a culture of innovation and research in cutting edge technologies to meet societal needs with environmental concerns.
- Providing opportunities for professional career, skill development, entrepreneurship and lifelong learning.

Dedicated to



SUPRIYA SAHU

Supriya Sahu is an Indian IAS officer and a leading environmental advocate recognized for her contributions to climate resilience and sustainable development. In 2025, she received the UNEP Champions of the Earth Award in Inspiration and Action category, the United Nations' highest environmental honour. She is recognized for promoting ecosystem restoration, sustainable cooling solutions, and climate adaptation initiatives. Her work has set a benchmark for integrating environmental sustainability into public policy and governance.

Inside Shell

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B. N. M. Institute of Technology

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"Learning is the only thing the mind never exhausts, never fears, and never regrets." -Leonardo da Vinci.

Dear Readers,

With immense joy and excitement, we present to you the latest edition of our newsletter from the Computer Science and Engineering Department – 'SHELL Volume 10 Issue 2'! This edition is a testament to the talent, creativity, and vibrant spirit that defines our institution.

Our newsletter reflects the collective aspirations and diverse perspectives of our student body and faculty. Through prose, poetry, photography, and art, this magazine captures the essence of our community—its achievements, dreams, and the journey we all share.

The editorial team extends its heartfelt gratitude to everyone who contributed their work, ideas, and support to bring this publication to life. A special thank you to our faculty mentors, contributors, and the design team for their unwavering dedication.

Department Profile

The Department of Computer Science & Engineering started in 2001 with an intake of 60 students and the present intake is 180. The department is renowned for imparting quality education with well-qualified and dedicated faculty members, who are experts in various domains of Computer Science & Engineering and strive for an exceptional career growth for the students. The department offers undergraduate and postgraduate programs in Computer Science & Engineering. A well-equipped Research & Development (R&D) Center, affiliated to VTU, has been set up to cater to the needs of the research scholars, as they conduct cutting-edge research towards doctoral degrees. The Teaching-learning process put in place by the department is well defined to help students explore the trending technologies via Skill Development Programs organized by the industry-institute Interaction Cell. Students are also encouraged to improve their performances in the University examinations through Performance Enhancement Classes. The Innovative Project Labs (IPL) of the R&D Center encourages and equips the faculty and students to uncover innovative ideas, which are also funded through the Innovation & Entrepreneurship Development Cell.

Department overview

Message From The HOD

Welcome to the Department of Computer Science and Engineering, BNMIT, Bangalore. The department is well-supported by seasoned faculty members with an average experience of 10 years. It also boasts of a state-of-the-art infrastructure facility that supports and encourages students to acquire knowledge and gain practical experience. During the course, students mould their careers, polish their technical skills and inculcate team spirit with exceptional oral and written communication skills. The department also extends financial and technical support to the students to participate in competitions and hackathons at state, national and international levels. The faculty members are encouraged to acquire higher degrees and conduct research in the areas that benefit the society. They are also supported in conducting and participating in workshops, symposium and conferences at national and international levels. Last but not the least, they are motivated to adopt innovative teaching methodologies and best practices to make classroom a pursuit of learning.



Dr. Chayadevi M L

Agentic AI: When Software Learns to Plan Before It Acts

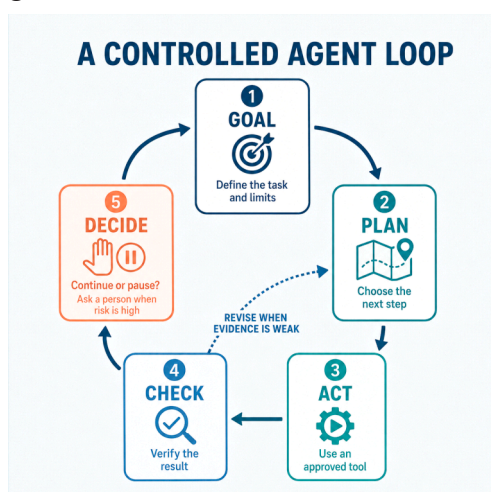
Most of us use artificial intelligence by asking a question and waiting for an answer. Agentic AI changes that familiar pattern. Instead of stopping after one response, an AI agent can break a goal into smaller tasks, choose an approved tool, check what happened and decide what to do next. It is less like an automated system and more like a junior assistant that can follow a process.

1. The Need for Autonomous Reasoning

Today's digital work is rarely completed in a single step. Consider a student preparing a mini-project on urban flooding. The work may involve finding reliable rainfall data, cleaning missing values, running code, comparing results with past flood events and writing a short report. A conventional chatbot can explain each step, but the student must repeatedly transform information between tools and remember what has already been checked.

An AI agent is needed to keep the larger objective in view while handling these connected tasks. It can plan a sequence, call permitted software, observe the output and revise it's plan when a step fails. However, giving software the ability to act also creates a new problem: a wrong answer can now become a wrong action. The agent may use an unreliable source, expose private data or continue even when evidence is incomplete.

Therefore, agentic AI does not mean unlimited autonomy. It must work inside clear boundaries. Permissions should control which tools it can use; logs should show what it did; and high-impact decisions should return to a person. The real purpose is not to remove humans from the process, but to reduce redundant effort while keeping human judgement where it matters.



2. Clear Visual Diagram

A dependable agent follows a controlled loop. If the result is weak, sensitive or outside its permission, it pauses instead of pretending the task is complete.

3. Advantages of Agentic AI

When it is designed with limits and verification, agentic AI offers several practical advantages:

- **Handles multi-step work:** The agent carries context from one stage to the next, reducing repeated prompts and manual copying.
- **Checks before continuing:** It can test code, validate a file or compare evidence with a success condition instead of relying only on fluent text.
- **Adapts when a step fails:** If a tool returns an error or the data is incomplete, the agent can revise the plan rather than restart the entire task.
- **Makes decisions traceable:** Tool calls, sources and approvals can be recorded, helping a user understand how the final result was produced.
- **Keeps people in control:** Approval points can reserve financial, medical, academic or privacy-sensitive actions for a human reviewer.

4. Future Scope

The future of agentic AI is likely to be specialised rather than all-knowing. One small agent may collect evidence, another may write code and a third may test the result. A coordinator can connect their work while a person sets the goal and approves important actions. Such systems could support personalised learning, software testing, supply-chain monitoring, healthcare administration and disaster-response planning.

Research must now improve memory, planning and uncertainty estimation. Agents also need protection against malicious instructions hidden in webpages or documents. Clear audit trails, limited tool access and energy-efficient models will be just as important as raw intelligence. An agent should be judged not only by whether it reaches the right answer, but also by whether it uses trustworthy evidence and knows when to stop.

Another promising direction is on-device agentic AI. Smaller models running on a laptop or phone could organise notes, assist with accessibility and complete routine tasks without sending every piece of personal data to a remote server. For India, agents that understand regional languages and continue to function with limited connectivity could make the technology useful beyond well-connected urban users.

For computer science students, this field offers a practical project direction. A useful prototype can begin with one narrow task, a few safe tools and a compulsory approval step. For example, a campus agent could identify timetable clashes and suggest alternatives, but wait for a faculty member before

changing anything. That small pause is not a weakness. It is what turns clever automation into responsible engineering.

Conclusion

Agentic AI is valuable because it connects intelligence with action. Its success, however, will depend on disciplined design rather than impressive demonstrations. The best agents will be able to work independently on routine steps, explain the evidence behind their choices and hand control back to a person at the right moment.

Daksha Mali Patil
1BG24CS037, V CSE A

Edge AI: Bringing Intelligence Closer to the Source

Most AI systems still work the same way: send the data far away and wait for an answer. Edge AI changes that. Instead of relying on a distant server, the model runs directly on the device that captures the data, so a decision can be made the instant it's needed, without a network round trip.

1. The Limits of Centralized Processing

Most AI-powered products today still work the same way: capture some data, send it off to a cloud server, wait for the server to think, then act on whatever comes back — this is how smart cameras, wearables, industrial sensors and even a lot of autonomous systems have traditionally operated. That round trip is fine for non-urgent tasks. It starts to fall apart the moment latency actually matters, the connection drops, or the data itself is too sensitive to leave the device in the first place.

This is exactly the gap Edge AI closes. Instead of shipping raw data out and waiting, the model itself runs on the device that's already capturing the data — a camera, a sensor, a chip on someone's wrist — so the decision happens instantly, with no network round trip involved. A safety camera on a factory floor can flag a hazard the instant it appears. A wearable can catch an irregular heartbeat without ever transmitting biometric data anywhere. A sensor in a field with zero signal can still decide, on its own, to turn the irrigation on.

None of this is as simple as just copying a model onto a phone or a microcontroller, though. Edge devices come with real limits — on memory, on power, on compute — and none of that goes away just because the use case is time-critical. The actual engineering problem is squeezing a model down, optimising it, and securing it enough that it can run reliably at the edge without giving up the accuracy that real-time, safety-critical systems depend on.

2. Clear Visual Diagram

The diagram below sketches out what a real edge-AI pipeline looks like in practice. Data gets sensed, an on-device model processes it, and the device acts on the result — all in one tight, low-latency loop. The cloud only shows up occasionally, for things like model updates, and even then it's optional.

3. Advantages of Edge AI

When it is designed with the right compression and security in mind, Edge AI offers several practical advantages:

- **Ultra-low latency:** Inference runs right there on the device, in milliseconds — which matters a lot if you're building something like an autonomous drone or an industrial safety monitor that genuinely can't afford to wait.
- **Reduced bandwidth use:** Devices only need to send back the meaningful result, not a constant stream of raw video or sensor data, so networks — and data bills — stay a lot lighter.
- **Stronger privacy:** Biometric, medical or financial data can be processed right where it's captured, so there's simply less of it ever in transit to be intercepted or leaked.
- **Offline reliability:** No signal, no problem: devices keep working without an internet connection, which is a big deal for remote industrial sites, farms and disaster response.
- **Lower operating cost:** Less reliance on continuous cloud compute and data transfer adds up to real infrastructure savings once you're operating at scale.
- **Energy efficiency:** Purpose-built low-power chips such as NPUs and TPUs let these models run comfortably on batteries and in genuinely small form factors.

4. Future Scope

Where's this heading next? Probably smaller, smarter and a lot more collaborative. TinyML is already pushing models onto microcontrollers with just kilobytes of memory — enough to bring intelligence to ultra-low-power wearables and even disposable sensors. Federated learning takes this a step further: fleets of devices can improve one shared model together without any single device ever handing over its raw data, which is good news for both privacy and personalisation.

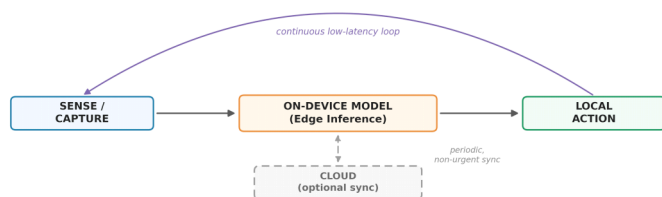
On the hardware side, neuromorphic chips, in-memory computing and the next generation of NPUs keep pushing performance-per-watt higher. Pair that with 5G and 6G, and you get hybrid systems that handle fast, private inference at the edge and hand off only the genuinely heavy reasoning to the cloud. Autonomous

vehicles, robotics and smart cities are all going to lean harder on split-second local decisions that simply can't wait for a distant server to respond.

For students and engineers, there's a lot more here than just model design. Building edge systems that actually hold up in the real world means getting comfortable with embedded systems, compression and quantisation, wireless communication, security, and design that accounts for real people using the thing. The systems that end up mattering won't just be the smallest or the fastest — they'll be the ones that stay accurate, secure and power-efficient even when deployed somewhere completely unpredictable.

Conclusion

Edge AI is valuable because it brings intelligence to where the data is actually created. Its success, though, will depend on disciplined compression, security and hardware choices — not simply on moving computation as close to the sensor as possible. The best edge systems will run efficiently within tight limits, protect the data they touch, and keep working reliably in the unpredictable environments where they're deployed.



Darshan J
1BG24CS040, V CSE A

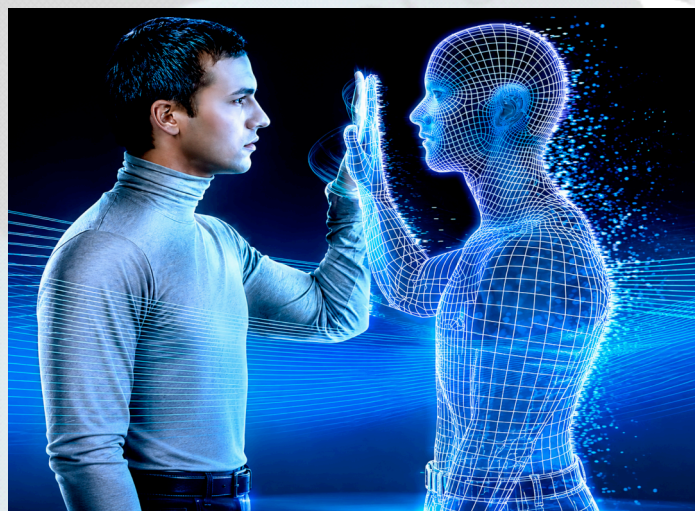
Digital Twins: Bridging the Physical and Digital World

Introduction

Digital Twins are an important technology in Industry 4.0 that creates a virtual representation of a physical object, system, or process. Unlike traditional simulations, a Digital Twin is continuously updated using real-time data collected through sensors and IoT devices. By combining IoT, cloud computing, AI, and data analytics, Digital Twins enable organizations to monitor systems, predict failures, optimize performance, and make informed decisions. They can also be used to test different scenarios virtually before implementing changes in the physical system.

Discussion

A Digital Twin operates through a continuous connection between a physical system and its digital counterpart. Sensors collect information such as temperature, vibration, pressure, and energy consumption, which is



transmitted to cloud or edge platforms for processing. Simulation models and AI-based analytics then analyse this information to identify abnormalities, predict maintenance requirements, and optimize system operations. Since the digital model evolves with the physical asset, it can support activities throughout the asset lifecycle, from design and testing to operation and maintenance.

Digital Twins have applications across several sectors. In healthcare, patient-specific models can support personalized treatment planning using medical and sensor data. In smart cities, they can assist with traffic management, infrastructure planning, energy optimization, and emergency response. In aerospace, Digital Twins are used to monitor aircraft components and support predictive maintenance, while in agriculture, they can combine soil, weather, and irrigation data to improve crop management and resource utilization. Key benefits include reduced downtime, lower maintenance costs, safer testing, improved efficiency, and better resource management. However, challenges such as data quality, cybersecurity, infrastructure requirements, system complexity, and the need for multidisciplinary expertise must be addressed for successful implementation.

Conclusion

Digital Twins are transforming modern engineering by integrating real-time monitoring, simulation, and predictive analytics into a unified digital environment. Their ability to continuously represent and analyse physical systems makes them valuable for improving efficiency, reliability, safety, and sustainability. With continued advances in AI, IoT, cloud computing, and edge technologies, Digital Twins are expected to become increasingly important in smart industries, healthcare, agriculture, aerospace, and urban development.

Nityaashree D R
1BG24CS116, V CSE B

Staff Achievements

- **Dr. Chayadevi M. L.** awarded and recognized for outstanding service in the field of Engineering Profession & Research by the Institute of Engineers (IEI India), Mysore Local Centre, on the occasion of the 58th Engineers Day and 164th birth anniversary of Sir M. Visvesvaraya on 15th September 2025.
- **Dr. Chayadevi M. L.** served as the Guest of Honour at the International Intellectual Property Rights Conference 2025, organized by WEGROW Pvt. Ltd., held at Taj Hotel, Mumbai, on 13 July 2025.
- **Dr. Chayadevi M. L.** received the Best IP Researcher Award 2025 from WEGROW Pvt. Ltd. in recognition of her excellence in IP research, on 11 July 2025.
- **Dr. Chayadevi M. L.** received a Certificate of Excellence for guiding project in the Samsung PRISM International Program (March–October 2024) on the project, “Tool for Feature-Flag Compression Between Two Releases and Aligning the Current Code Accordingly.”
- **Dr. Chayadevi ML, Dr. Kavitha Jayaram, and Dr. Kavita Horadi** received the Research Excellence Award 2025 for their outstanding contributions as Keynote Speakers at the International Conclave on “Patent Inventive Steps 2025,” organized by WEGROW and held at Banaras Hindu University, Varanasi, on 22 November 2025.
- **Dr. Anitha N.** received a Certificate of Appreciation for organizing a special session on “Integrating Machine Learning with DevOps: Harmonizing Agility and Unleashing Synergy” at ICCIDC 2025, held in Bali, Indonesia, from 10–11 October 2025.
- **Dr. Anitha N.** served as a Session Chair at the 9th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions (CSITSS-2025), held at RV College of Engineering from 20 to 22 November 2025.
- **Dr. Anitha N.** served as a Jury Member for the State-Level Inter-Collegiate Project Exhibition “PROTATVA-2025”, organized by RV Institute of Technology & Management, Bengaluru, on 29 October 2025.
- **Dr. Geetha S.** served as a Mentor for the NEC IIT Programme, contributing her expertise and guidance to the programme.
- **Dr. Manjunatha S.** served as a Session Chair at International Conference on Digital Technology and Engineering, RV Institute Of Technology and Management, JP Nagar, Bengaluru, Karnataka, 16th and 17th October 2025.
- **Dr. Rajanishree M.** served as a Resource Person for the program titled “Multimodal Generative AI: Techniques, Applications, and Future Directions,” organized by E & ICT Academy, IIT Roorkee, in association with Bennett University, Greater Noida, from 12 to 16 May 2025.
- **Dr. Rajanishree M.** served as a Resource Person for the session titled “Introduction to Encoder-Decoder Architecture and Attention Mechanism,” organized by IIHMR, Bengaluru, on 14 and 16 October 2025.
- **Dr. Rajanishree M., Dr. Swetha M. D., and Dr. Kavita Horadi** served as Resource Persons for the FDP titled “Gen AI & Agentic AI: Redefining Intelligence for Tomorrow,” organized by BNMIT from 27 to 31 October 2025.
- **Dr. Rajanishree M.** received a Certificate of Appreciation for delivering a guest lecture and hands-on training session on “Generative AI and its Architecture, Transformers and LLMs” at IIHMR, Bengaluru, on 14 October 2025.
- **Dr. Kavitha Jayaram** served as the Master of Ceremonies (MC) and Session Chair at the 1st IEEE International Conference on Distributed Ledger Technologies (IEEE ICDLT 2025), held at Crowne Plaza, Pune City Centre, from 5 to 7 November 2025.
- **Dr. Kavitha Jayaram** received a Letter of Appreciation for delivering a guest lecture on “How Gen-AI & AI-Agents Transform Engineering: Smarter Than You Think” at Vemana Institute of Technology on 27 September 2025.
- **Dr. Kavitha Jayaram** received a Certificate of Appreciation for delivering a lecture on “AI-Driven Engineering: Transforming Traditional Industries through Intelligent Automation,” organized by the State Centre of the Institution of Engineers (India), on 8 September 2025.
- **Dr. Kavitha Jayaram** served as a Session Chair at the 35th International Symposium on Shock Waves (ISSW35), held in Brisbane, Australia, from 7 to 11th July 2025.

- **Dr. Kavitha Jayaram** served as a Distinguished Speaker on “Automated Multimodal Materials Analysis: A Unified Pipeline for Experimental Characterization Data with ML-Based Nanostructure Identification” at the Advanced Chemistry World Congress, held in Spain from 25–27 March 2026.
- **Dr. Karthik S.** served as a Resource Person for the two-day hands-on session on Robotic Process Automation, organized by SJ CIT, Chikkaballapur, from 3 to 4 September 2025.
- **Dr. Swetha M. D.** served as a Session Chair for ICWITE-2025, organized by the IEEE Women in Engineering Affinity Group, Bengaluru Section, from 26 to 27 September 2025.
- **Dr. Swetha M. D.** received the Excellence Award from We Grow Pvt. Ltd., JIT, Bengaluru, on 30 August 2025.
- **Dr. Swetha M. D.** received a Certificate of Appreciation for organizing the FDP on “Gen AI & Agentic AI: Redefining Intelligence for Tomorrow”, organized by the Department of CSE, BNMIT.
- **Dr. Swetha M. D.** received a Certificate of Appreciation for delivering a guest lecture and hands-on training session on AWS Services and RESTful APIs at IIHMR, Bengaluru, on 18 October 2025.
- **Dr. Swetha M. D.** received a Certificate of Appreciation for delivering a guest lecture and hands-on training session on Software Engineering Project Management Tools at IIHMR, Bengaluru, on 23 December 2025.
- **Dr. Chaitra M.** served as Project Guide for “Intelligent Prosthetic Limb Actuation via Deep Learning for Neuromuscular Rehabilitation in Amputees,” which won First Prize for Best Project at the National-Level Project Competition 2025, organized by the Department of CSE, Bangalore Institute of Technology, on 14 November 2025.
- **Dr. Chaitra M.** served as a Resource Person for the FDP titled “Advancements in ML and DL: From Concepts to Applications,” organized by JSSATE, Bengaluru, on 12 September 2025.
- **Dr. Chaitra M.** served as Session Chair and Reviewer at SSITCON-2025, Tumakuru, from 17 to 18 October 2025.
- **Dr. Chaitra M.** served as a Session Chair at the International Conference on Intelligent Computing and Communication Systems 2025 at JSSATE on 18 September 2025.
- **Dr. Chaitra M.** served as Session Chair for IEEE IC3IT-2025 on 25 October 2025.
- **Dr. Chaitra M.** received a Certificate for Exceptional Contribution as a Winner-Team Mentor at Smart India Hackathon 2025, along with a cash prize, on 8 December 2025.
- **Dr. Chaitra M.** served as a Jury Member for the National-Level Project Exhibition at BIT, Bengaluru.
- **Dr. Chaitra M.** received a Certificate of Appreciation for serving as a Jury Member at HackVerse-TechFusion 2025 on 14 October 2025.
- **Dr. Chaitra M.** served as a Panel Member for the State-Level Hackathon AXIOM – 24 Hour at SJBIT, Bengaluru, on 7 November 2025.
- **Dr. Chaitra M.** and **Ms. Priyanka S.** received a Certificate for Exceptional Contribution as Winner-Team Mentors at Smart India Hackathon 2025, along with a cash prize, on 12 August 2025.
- **Dr. Kavita Horadi** served as a Resource Person for the FDP titled “Gen-AI and their Applications,” organized by BNMIT, Bengaluru, on 31 October 2025.
- **Dr. Kavita Horadi** was recognized as a Research Supervisor at Visvesvaraya Technological University (VTU), Belagavi, on 23 July 2025.
- **Dr. Kavita Horadi** received a Letter of Appreciation for serving as an Examiner for Hackathon 2025 at the Department of CSE, BNMIT.
- **Dr. Revanna Siddappa** served as a Session Chair at the 2025 International Conference on Advancement in Communication & Computing in Technology (INOACC), held at Sai Vidya Institute of Technology, Bengaluru, from 4 to 6 April 2025.
- **Dr. Santhosh Reddy P.** received a Certificate of Appreciation for organizing a special session on “Integrating Machine Learning with DevOps” at the ICCIDC 2025 conference in Bali, Indonesia, from 10 to 11 October 2025.
- **Mrs. Manikantha K.** received a Certificate of Appreciation for serving as the V Semester Internship Coordinator in the Department of CSE from 2 to 20 June 2025.

- **Mrs. Mona** received a Certificate of Appreciation for serving as a Jury Member at HackVerse-TechFusion 2025, organized at Dayananda Sagar Academy of Technology and Management, Bengaluru, on 14 October 2025.
- **Mrs. Mona** served as a Resource Person for the training on “Cybersecurity and Penetration Testing Tools,” organized by GP Tech Solutions, from 18 to 22 August 2025.
- **Mrs. A. K. Sreeja** received a Thank You Note for her valuable contribution as a Judge at NEC-Eureka@BNMIT 2025, organized by ED Cell-BNMIT in collaboration with E-Cell, IIT Bombay, on 22 August 2025.
- **Mrs. Manjushree K.** received a Thank You Note for her valuable contribution as a Judge at NEC-Eureka@BNMIT 2025 on 22 August 2025.
- **Mrs. Priyanka Padki** served as a Resource Person for the two-day hands-on session on Robotic Process Automation, organized by SJCIT, Chikkaballapur, from 3 to 4 September 2025.
- **Mrs. Supriya Sudhir** received a Certificate of Appreciation for serving as a Resource Person at BNM Degree College on 20 November 2025.
- **Mrs. Aashitha L. Shamma** received a Letter of Appreciation for serving as an Examiner for Hackathon 2025 at the Department of CSE, BNMIT, on 7 August 2025.

Staff Journal Publication:

- **Gowda Puttaswamy, Nandini, Narasimha Murthy, and Dr. Anitha N** published the research paper “Optimized Workload Distribution Using a Dynamic Adaptive Algorithm for Real Time Data Processing in Smart Networking” in the International Journal of Computing and Digital Systems, in July 2025 (Scopus, Q3), doi:10.12785/ijcds/1571116743.
- **Ronihal S S, Dr. Nandini G, Kavya N L, Jagruthi H, Laxmi V, and Divyashree S R** published the research paper “AI-Driven IoT Framework for Advanced Cardiac Monitoring and Analysis” in Ingénierie des Systèmes d'Information, in July 2025 (Scopus, Q3), doi:10.18280/isi.300713.
- **Venkatesh R T, Mrutyunjaya, Dr. Chaitra M, Murthy S G, Rao P B S, Ravindranath A, Chopra N, and Chillal G D** published the research paper “AI-Driven Multimodal Mental Health Monitoring System Using Emotional, Physiological and Self-Reported Data” in Ingénierie des Systèmes d'Information, in August 2025 (Scopus, Q3), doi:10.18280/isi.300801.
- **Rekha K S, Jainapur P, Manjushree K, Dhananjaya S, Nandini S R, Dr. Nandini G, and Sunitha R** published the research paper “Deep Reinforcement Learning-Based Energy-Aware Intrusion Prevention in IoT Environment” in the International Journal of Safety and Security Engineering, in August 2025 (Scopus, Q2), doi:10.18280/ijss.150819.
- **Shete R P, Dr. Amith Shekhar C and Mahajan Y et al.** published the research paper “IoT-Driven Ensemble Machine Learning Model for Accurate Dissolved Oxygen Prediction in Aquaculture” in Discover Internet of Things, in September 2025 (Scopus, Q2), doi:10.1007/s43926-025-00201-w.
- **C. Shraddha, Dr. Chayadevi M L, and M. A. Anusuya** published the research paper “Biorthogonal Wavelet Packet and Adaptive Filters for Noisy Speech Reduction” in Engineering, Technology & Applied Science Research, in October 2025 (Scopus, Q2), doi:10.48084/etasr.11071.
- **Dr. Chaitra M, Chikkanna S, Mrutyunjaya C, Manjappa R, Mysore Lakshmanagowda C, Thimmapura Venkatesh R, Gereen Murthy S, and Dr. Rajanishree M** published the research paper “A Hybrid Deep Learning Framework for Multimodal DeepFake Detection” in the International Journal of Safety and Security Engineering, in October 2025 (Scopus, Q3), doi:10.18280/ijss.151002.
- **A. Bongale and Dr. Amith Shekhar C** published the research paper “A Firefly Optimization Algorithm for Hyperparameter Tuning of the Support Vector Classifier to Predict Water Potability” in Engineering, Technology & Applied Science Research, in October 2025 (Scopus, Q2), doi:10.48084/etasr.12776.
- **Ramisetty S. et al., including Dr. Nandini G,** published the research paper “A Transformer Guided Generative Adversarial Network (TG-GAN) for Style Transfer in Artistic and Natural Scene Images” in Ingénierie des Systèmes d'Information, in October 2025 (Scopus, Q3), doi:10.18280/isi.301016.

- **Priyanka Sreenivas, Kavita V. Horadi, Kalpa Rajashekar and Prof. Kalpa R**, published a paper titled “Autoencoder-Based Gaussian Mixture Model for Diagnosing Early Onset of Diabetic Retinopathy” in” Indonesian Journal of Electrical Engineering and Computer Science, Vol. 40, July 2025
- **Venkatesh, R. T., Mrutyunjaya, Chaitra M., Murthy S. G., Rao P. B. S., Ravindranath A., Chopra N., and Chillal G. D.** "AI-Driven Multimodal Mental Health Monitoring System Using Emotional, Physiological and Self-Reported Data." *Ingénierie des Systèmes d'Information*, Aug. 2025, doi:10.18280/isi.300801.

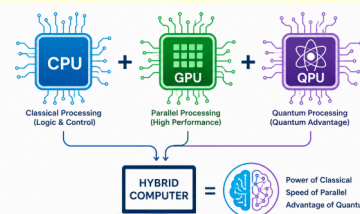
Staff Conference Publication:

- **Supriya T C and Dr. Manjunath S** presented the research paper “mBERT — A Transformer Based Approach to Analyze the Sentiment of English-Typed Kannada Text Along with Emotion Detection Using FER CNN” at IMPACT 2025, Patna, India, in July 2025 (Scopus indexed).
- **Dr. Kavitha Jayaram and V Jayaram** presented the research paper “Shock Processing of CdS Nanostructure and Computer Simulation with Machine Learning” at the 35th International Symposium on Shock Waves (ISSW35), Brisbane, Australia, in July 2025 (Scopus indexed).
- **Dr. Kavitha Jayaram** and co-authors presented the research paper “Effect of Shock Wave on the Structural and Optical Properties of MoS₂ Layered Compound” at ISSW35, Brisbane, Australia, in July 2025 (Scopus indexed).
- **Dr. Kavitha Jayaram** and co-authors presented the research paper “Development of Multiphase Shock Tube Facility and Shock Processing of Natural Sand from Australian Desert” at ISSW35, Brisbane, Australia, in July 2025 (Scopus indexed, published with students).
- **Dr. Chayadevi M L** and co-authors presented the research paper “Real-Time QR Code Recognition for Instant Data Access” at the International Conference on Computing and Communication Networks (ICCCNet-2025), Manchester, UK, in August 2025 (Scopus indexed, published with students).
- **Dr. Chayadevi M L** and co-authors presented the research paper “Utilizing Cloud Storage Solutions for Secure Data Handling in Brain Tumor Detection Using CNN” at the International Conference on Data Mining and Information Security (ICDMIS 2024), Singapore, in August 2025 (Scopus indexed, published with students).
- **Dr. Chayadevi M L** and co-authors presented the research paper “Automatic Generation of Captions using Deep Learning” at ICCCN 2025, Manchester, UK, in August 2025 (Scopus indexed, published with students).
- **Kumar A and Dr. Anitha N** presented the research paper “Effective Portfolio Construction Using Machine Learning and Optimization Theory” at IDSCS 2024, Singapore, in August 2025 (Scopus indexed, published with students).
- **Jayashree M and Dr. Anitha N** presented the research paper “Framework for Analyzing and Predicting the Unstructured Clinical Text Data Using Natural Language Processing” at IDSCS 2024, Singapore, in August 2025 (Scopus indexed).
- **M Monikha, Dr. Chaitra M, and Raksha R** presented the research paper “SmartCotton: Leveraging CNNs for Automated Detection of Cotton Leaf Diseases” at the 2nd International Conference on Intelligent Algorithms for Computational Intelligence Systems (IACIS), Hassan, India, in August 2025 (Scopus indexed).
- **Vandana N S and Dr. Anitha N** presented the research paper “Machine Learning Techniques for Enhanced IoT Security” at the 2025 International Conference on Intelligent Computing and Knowledge Extraction (ICICKE), Bengaluru, India, in September 2025 (Scopus indexed).
- **Dr. Chayadevi M L** and co-authors presented the research paper “Socially Connected Internet of Things: A Systematic Review” at the Springer International Conference on Data Mining & Information Security (ICDMIS 2024), Singapore, in October 2025 (Scopus indexed).
- **Dr. Amith Shekhar C, Ananya A Naik, Dev Baliyan, and Firoz Khan** presented the research paper “Generative AI and Adaptive Tutoring in Education: A Comprehensive Literature Review” at the International Conference on Recent Advances in Computer Science and Information Technology, Bengaluru, India, in October 2025 (Scopus indexed).
- **Dr. Amith Shekhar C** and co-authors presented the research paper “A Smart Wearable System for Predictive Cardiac Using IoT, ML and RPA” at ICETEG 2025, Mysore, India, in October 2025 (Scopus indexed, published with students).

- **Dr. Swetha M D** and co-authors presented the research paper “Detection of Alzheimer's Disease using MRI” at the 2025 International Conference on Artificial Intelligence and Emerging Technologies (ICAIET), Bhubaneswar, India, in October 2025 (Scopus indexed, published with students).
- **Dr. Swetha M D** and co-authors presented the research paper “Cardio Risk Prognostics Framework for Prediction and Analysis” at ICAIET 2025, Bhubaneswar, India, in October 2025 (Scopus indexed).
- **Dr. Swetha M D** presented the research paper “A Comprehensive Review of Smart Agriculture: Integrating AI, IoT, and Precision Farming” at ICETEG 2025, Mysore, India, in October 2025 (Scopus indexed).
- **Dr. Chayadevi M L's** research paper “Innovation of Driver's Safety through Deep Learning” was presented at Elsevier SSRN ICCTRDA 2025, Duy Tan University, Da Nang, Vietnam, in November 2025 (Scopus indexed, published with students).
- **Dr. Manjunath S** and co-authors presented the research paper “Face Recognition Models for Social Media” at the 9th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Bengaluru, India, in November 2025 (Scopus indexed, published with students).
- **Dr. Kavitha Jayaram** and co-authors presented the research paper “Blockchain Driven Traffic Optimization for Emergency Vehicles” at the International Conference on Distributed Ledger Technologies (ICDLT 2025), Pune, India, in November 2025 (Scopus indexed, published with students).
- **Dr. Karthik S** and co-authors presented the research paper “The Digital Drain: Predictive Analytics of Smartphone Impact on Health” at the 9th CSITSS, Bengaluru, India, in November 2025 (Scopus indexed, published with students).
- **Dr. Swetha M D** and co-authors presented the research paper “Cognispect: Exploring Cognitive Analytics for Fraud Detection” at AICCoNS 2025, Dubai, in November 2025 (Scopus indexed, published with students).
- **Dr. Swetha M D** presented the research paper “Tesseract OCR for Multilingual Text Recognition on a Raspberry Pi 4” at ICIAS 2025, Udaipur, India, in November 2025 (Scopus indexed).
- **Dr. Swetha M D** presented the research paper “PsychoPy-Driven Framework for Measuring Visual Acuity in Preverbal Children” at the 2025 ICANCS, Chennai, India, in November 2025 (Scopus indexed).
- **Dr. Swetha M D** presented the research paper “Modern Day LLMs: A Goldmine or a Landmine?” at INSPIRE 2025, Moodabidri, India, in November 2025 (Scopus indexed).
- **Dr. Swetha M D** presented the research paper “POTSPOT: An AI Based Approach to Crowdsourcing Road Safety” at ICCIST 2025, Bengaluru, India, in December 2025 (Scopus indexed).
- **Prof. Aashitha L Shamma, Dr. Deepa Gupta, Dr. Susmitha Vekkot, and Dr. Suja P** presented the research paper "Interpretable COVID-19 Diagnosis from Coswara Data Using Hybrid Feature Selection and Deep Neural Networks" at the 16th IEEE ICCCNT 2025, held at IIT Indore, during July 6–11, 2025. Published in Scopus-indexed proceedings.
- **Dr. Kavitha Jayaram, Samarth Mandagere, Sampriti Gopiseti, and Sahit S,** "Automail AI: Intelligent Voice-Controlled Email Generator," International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE 2025), 2025.
- **Husna Tabassum, Najmusher H, Prof. Manjushree K, Dr. Seema Shivapur, and Dr. B. Mary Nathisiya,** "Performance Analysis on Diabetic Retinopathy Detection Using Machine Learning," Fifth International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT 2025), during September 12–13, 2025.
- **Anirudh R, Dikshith Manjunatha, and Dr. Manjunath S,** "Face Recognition Models for Social Media," 9th International Conference on Computational System and Information Technology for Sustainable Solutions (CSITS 2025), during November 22–23, 2025.

INTERESTING FACT

The future computer may not be purely classical or purely quantum—it may combine CPU + GPU + QPU, with each processor handling the type of computation it is best suited for.



Book/ Book Chapter:

- **Dr. Rajanishree M** authored the book “Deep Learning and Neural Networks”, published by Charulatha Publications (ISBN: 978-93-6260-075-2), in the 2025–26 academic year.
- **Dr. Chayadevi M L's** paper “Socially Connected Internet of Things: A Systematic Review” was published as a book chapter in Springer's Lecture Notes in Networks and Systems, Vol. 1385, in the 2025–26 academic year.
- **Dr. Chayadevi M L's** paper “Fine-Tuning T5 for Robust Text-to-SQL Translation” was published as a book chapter in Emerging Technologies in AI, Computation, Communication, and Cybersecurity (CRC Press, Taylor & Francis), in the 2025–26 academic year.
- **Dr. Anitha N's** paper “Effective Portfolio Construction Using Machine Learning and Optimization Theory” was published as a book chapter in Springer's Lecture Notes in Networks and Systems, Vol. 1354, in 2025, doi:10.1007/978-981-96-4880-1_39.
- **Dr. Anitha N's** paper “Framework for Analyzing and Predicting the Unstructured Clinical Text Data Using Natural Language Processing” was published as a book chapter in Springer's Lecture Notes in Networks and Systems, Vol. 1354, in 2025, doi:10.1007/978-981-96-4880-1_39.
- **Dr. Anitha N's** paper “Hybrid Parts of Speech Tagger for Morphologically Rich Languages” was published as a book chapter in Springer's Lecture Notes in Networks and Systems, Vol. 1389, in the 2025–26 academic year.
- **Dr. Geetha S's** paper “Evolutionary Algorithm-Based Solutions for Energy Efficiency in Wireless Sensor Networks” was published as a book chapter in Battery-Free Sensor Networks for Sustainable Next-Generation IoT Connectivity (IGI Global), in the 2025–26 academic year.
- **Dr. Chaitra M's** paper “Cognispect: Exploring Cognitive Analytics for Fraud Detection” was published as a book chapter in Emerging Technologies in AI, Computation, Communication, and Cybersecurity (CRC Press, Taylor & Francis), in the 2025–26 academic year.
- **Dr. Revanasiddappa Bandi's** paper “IoT-Enabled Silkworm Egg Counting: A Visual Processing Approach” was published as a book chapter in Lecture Notes in Electrical Engineering, Vol. 1300, in the 2025–26 academic year.
- **Devi Naveen, Akshitha Katkeri, Manikantha K, and Sreeja A K's** paper “Student Activity Monitoring Using Hybrid Deep Learning Technique During Online Examinations” was published as a book chapter by Wiley in 2025, doi:10.1002/9781394302666.

Staff Patents:

- **Prof. Priyanka S, Dr. Chayadevi M L, Spandana A. P, Shravya P, Shridevi Shetty, and Surbhi Sneha** were granted copyright registration (5844/2025-CO/SW) for "Netaware: Activity-Based Prediction of Internet Misuse," published in 4 August 2025.
- **Prof. Priyanka S, Dr. Chayadevi M L, Shamita M, Varsha A Habbu, and Yashaswini S** were granted copyright registration (5809/2025-CO/SW) for "Guardvision — Real Time Weapon Detection," published in 4 August 2025.
- **Dr. Karthik S, Dr. Sheba Selvam, Prof. Priyanka Padki, and Prof. A. K. Sreeja**, on behalf of BNMIT, were granted a design patent (423972-001) for "Artificial Intelligence Based Invasive Spinal Decompression Device for Spinal Cord Injury," published on 27 August 2025.
- **Dr. Kavita V. Horadi, Dr. Chayadevi M. L, Dr. Kavitha Jayaram, Varshini K, Tanisha Rani B, and Trupthi T**, on behalf of BNMIT, filed a utility patent (202541102044) for "Neuromorphic Hippocampal Emulator for Real-Time Memory Formation," filed on 23 October 2025 and published on 28 November 2025.
- **Dr. Swetha M. D, Dr. Chaitra M, Dr. Rajanishree M, Dr. Chayadevi M. L, and Dr. Kavita V. Horadi**, on behalf of BNMIT, had their design patent (474236-001) for "AI-Based Environment Sensor Housing" published on 19 September 2025.
- **Dr. Chayadevi M.L, Dr. Kavitha Jayaram, Dr. Kavita V. Horadi, Prof. A. Menaka, Prof. Kalyani S. Kumar, Prof. Supriya Sudhir, Prof. Kalpa R., Prof. Kusuma P., and Prof. Kavyashree**, on behalf of BNMIT, had their design patent (480216-001) for "Automotive Aviation X-Ray Inspection Machine" published on 13 November 2025.
- **Dr. Kavitha Jayaram, Neha P, Prarthana R Karanth, Pramod C, and Dr. Smitha Gayathri D**, on behalf of BNMIT, had their design patent (476651-001) for "RakX: Smart Headgear Monitoring and Risk Mitigation" published on 13 October 2025.

- **Dr. Anand M, Dr. Madhu Nayak, Padma R, Sharanya A R, Usha Rani J, Rummana Firdaus, Amruth V, Dr. Bharathesh Patel N, Kalyani S Kumar, Supriya Sudhir, Soumya B J, and Jeevitha H M** had their utility patent (202541103159) for "Detection and Classification of Diabetic Retinopathy Using Deep Learning" published on 27 October 2025.
- **Prof. Akshitha K, Prof. Manikantha K, Prof. Priyanka Padki, Prof. Manjushree K, Prof. Devi Naveen, and Prof. Karthik S**, on behalf of BNMIT, had their utility patent (202541085397 A) for "Implantable Biosensor System and Method for Predictive Disease Analytics" published on 3 October 2025.

Research Grants Received

- Under the mentorship of Dr. Chayadevi M L, student Ms. Ankitha K S completed the project "Automated Green House Monitor System," sanctioned by KSCST with a grant of ₹5,000 received in July 2025
- She Safe: An AI-Powered Hybrid System for Women's Safety Under the mentorship of Dr. Chaitra C. M, students Ms. Sanjana Murthy and Ms. Vishnu Priya K R completed the project "She Safe: An AI-Powered Hybrid System for Women's Safety," sanctioned by KSCST with a grant of ₹3,000 received in July 2025.
- Under the mentorship of Dr. Revanasiddappa Bandi, students Mr. B. S. Sagarvir, Mr. Aniketh G. V., and Mr. Aravind K V completed the project "Farm2Market: A Smart Contract Driven Market Place for Farmers," sanctioned by KSCST with a grant of ₹3,000 received in July 2025.

Consultancy

Dr. Chayadevi M. L (HoD & Professor) and **Dr. S. Geetha (Professor)**, both from the Department of CSE, BNMIT, provided a consultancy to the Bangalore South District PUC College Principals Association, receiving an amount of ₹50,000 from BNMIT. The consultancy involved planning, coordination, preparation of technical resources, and guidance for effective implementation of academic programs, benefiting the Association, participating PUC colleges, principals, faculty members, and students by enhancing institutional collaboration and promoting best practices in education and administration.

Student Achievements

Student Journal Publications

- **Manisha H. S. (1BG22CS077)** and **N. G. Shirisha (1BG22CS086)**, 7th-semester students, published the paper "Domain-Specific Sentiment Analysis of Twitter Data: A Machine Learning Approach" in IJCSE on 11 September 2025.
- **Rahul Vibhakar M. R. (1BG22CS119)**, **Kousthub D. G. (1BG22CS068)**, and **Nidish (1BG22CS095)**, 7th-semester students, published the paper "Human Emotion Recognition and Song Recommendation Model" in IJARPR (ISSN 30490103, Impact Factor 4.33), Volume 2, on 16 September 2025.
- **Namitha R. (1BG22CS088)**, **Pratyusha C. (1BG22CS116)**, and **Rekha Parashuram Pujari (1BG22CS124)**, 7th-semester students, published the paper "Block Bazaar: NFT and Smart Contract Driven E-commerce Platform" in IJSET (ISSN 23954752, Impact Factor 4), Volume 13, on 22 September 2025.
- **Nitika Kashyap (1BG22CS102)** and **Kritika Yadav (1BG22CS070)**, 7th-semester students, published the paper "AI-Powered Real-Time Counterfeit Detection and Currency Recognition with Voice Assistance for Visually Impaired Users" in IJARPR (ISSN 30490103, Impact Factor 4.33), Volume 2, on 27 September 2025.
- **Rakshita Patil (1BG22CS121)**, **Nithya S. (1BG22CS101)**, and **Pramila Diwate (1BG22CS110)**, 7th-semester students, published the paper "NextGen EduSummarize: AI-Powered Personalized Learning" in IJARPR (ISSN 30490103), Volume 2, on 29 September 2025.
- **Shamita M. (1BG22CS143)**, **Varsha A. Habbu (1BG22CS173)**, and **Yashaswini S. (1BG22CS189)**, 7th-semester students, published the paper "Guardvision — Real Time Weapon Detection" in IJARPR (ISSN 30490103), Volume 2, on 2 October 2025.

- **Preran S. M. (1BG22CS117)**, a 7th-semester student, published the paper "Image Captioning" in IJARPR (ISSN 25827422, Impact Factor 6.844), Volume 6, on 3 October 2025.
- **Vishruth M. V. (1BG22CS186)**, **Smaran Nanjundiah G. (1BG22CS154)**, and **Shreyas S. Tikotikar (1BG22CS153)**, 7th-semester students, published the paper "A Review of Supply Chain Management Practices in Pharmacies and Small-Scale Clinics" in IJARPR (ISSN 30490103), Volume 2, on 4 October 2025.
- **Shivam Raj (1BG22CS148)**, **Wani Huzzaif Hassan (1BG22CS188)**, and **Tahir Bashir Shah (1BG22CS167)**, 7th-semester students, published the paper "AI-Powered Missing Person Identification Systems" in IJARPR (ISSN 30490103, Impact Factor 4.33), Volume 2, on 7 October 2025.
- **T. Sai Shravan (1BG22CS165)**, **Samarth Uday (1BG22CS138)**, **Sourav Mantesh Shet (1BG22CS156)**, and **Suhas M. (1BG22CS162)**, 7th-semester students, published the paper "KCETIntelligen: An AI-Powered Question Generation System for KCET Examination Using LLM" in IJARPR (ISSN 30490103, Impact Factor 4.33), Volume 2, on 7 October 2025.
- **Parikshit Murli Rao (1BG22CS104)**, **Mrinaal M. S. (1BG22CS083)**, **Rohan M. R. (1BG22CS126)**, and **Nishit R. Kirani (1BG22CS099)**, 8th-semester students, published the paper "Design and Implementation of a Sensor-Fused IoT-Based Rifle Training Simulator with Real-Time Scoring and Feedback Analytics" in IJARPR (ISSN 3049-0103, Impact Factor 4.33), Volume 2, on 10 December 2025.

Student Conference Publications

- **Spandana A. P. (1BG22CS157)**, a 7th-semester student, presented the paper "Multi-Modal Data Exploration and Analysis for Predicting Severity Impairment Index Using Actigraphy and Behavioral Metrics" at the 2025 International Conference on Computing Technologies & Data Communication (ICCTDC), organized by Malnad College of Engineering, Hassan, on 4–5 July 2025.
- **Sanjay M., Shamanth Bharadwaj S. R., Shivakumar M. M., and Suprith Kumar H.**, 7th-semester students, presented the paper "Restoring Images Using Optimized GAN Techniques" at the 3rd International Conference on Artificial Intelligence Theory and Applications (AITA 2025), organized by IBS Bangalore, on 1–2 August 2025.
- **Raksha R. (1BG24CS406)** and **M. Monikha (1BG23CS079)**, 5th-semester students, presented the paper "SmartCotton: Leveraging CNNs for Automated Detection of Cotton Leaf Diseases" at the 2nd International Conference on Intelligent Algorithms for Computational Intelligence (IACIS), organized by Navkis College of Engineering, Hassan, on 22–23 August 2025.
- **Manasa M. (1BG22CS076)** and **Meghana P. R. (1BG22CS080)**, 7th-semester students, presented the paper "A Smart Wearable System for Predictive Cardiac Using IoT, ML and RPA" at the International Conference on Emerging Technologies in Electronics and Green Energy (ICETEG 2025), organized by JSS Science and Technology University, on 10–11 October 2025.
- **Aditya A. (1BG22CS007)**, **Aman Fayazahmed Soudagar (1BG22CS014)**, and **Chirag P. Rao (1BG22CS038)**, 7th-semester students, presented the paper "Emotion-Driven Adaptive Meme Recommendation System: A Novel Approach to Context-Aware Digital Expression" at the 17th IEEE International Conference CICN 2025, organized by the National Institute of Technology, held in Goa on 20 December 2025.
- **Aditya A. (1BG22CS007)** and **Karthik G. Sharma (1BG22CS064)**, 7th-semester students, presented the paper "A User-Centric Framework for Smart Water and Electricity Monitoring with Goal-Based Behavioral Nudging" at the same conference (17th IEEE CICN 2025) in Goa on 20 December 2025.
- **Anirudh R. (1BG22CS020)** and **Aman Fayazahmed Soudagar (1BG22CS014)**, 7th-semester students, presented the paper "LLM Hallucinations for RAG and KG Enhancement" at the 17th IEEE International Conference CICN 2025 in Goa on 20 December 2025.

Student Patents

- **Neha P. (1BG22CS089)**, **Prarthana R. Karanth (1BG22CS113)**, and **Pramod C. (1BG22CS111)**, 8th-semester students, were granted a design patent titled "Design to Smart Helmet" (Application No. 476651-001).

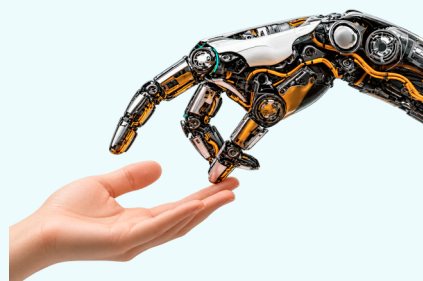
Hackathon Participations

- **V M Skandamahima, Priyanka B, Hemanth S Gowda, Eshwar G, Akash S, Spoorthi S Gowda, Yashaswini M, Komal B, Thrisha R, and Vismaya M**, all 5th-semester students, participated in the IOTPIA 2025 National Level Hackathon, organized by Reva University, on 12–13 September 2025.
- **Soham Samarth Rao**, a 5th-semester student, participated in CodeSphere: A 24-Hour Global Level Codeathon, organized by BMSCE, on 18–19 September 2025.
- **Kruthi K. Shetty**, a 5th-semester student, participated in the Ctrl+Alt+Compete Hackathon, organized by RVCE, on 6 August 2025.
- **Bhavana V. and Arundhati Harnoorkar**, 5th-semester students, participated in the Web Development Hackathon (a 48-hour online hackathon), organized by Tutedude's, on 25–27 July 2025.
- **Abhiram H.**, a 5th-semester student, participated in HACKFUSION 1.0, organized by Maharaja Institute of Technology, Mysore, on 27–28 September 2025.
- **Namitha, Mukkamalla Bhavya Sree, and Niharika R. B.**, 5th-semester students, participated in Hackademia, organized by National College, Jayanagar, on 24 August 2025.
- **Aditya Raj**, a 5th-semester student, participated in the CodeClash Hackathon, organized by Enginow, on 14 September 2025.
- **Chiranandan T. M. and Kishan Kumar C.**, 5th-semester students, participated in the Hack Beyond Limits Online Odyssey (a 48-hour hackathon), organized by the Tech Hub team, Rathinam College of Arts and Science, on 15–17 August 2025.
- **Suhas R., Soham Samarth Rao, Sindhura R., Thanmayee M. K., Varshith Reddy R., Vani Jayadev Khursapur, and Smitha P.**, 5th-semester students, participated in the 36-Hour Vibeathon, organized by Polaris School of Technology, on 7–9 November 2025.
- **Arnab Sadhu**, a 3rd-semester student, participated in Capture the Flag, organized by RV University, on 10–11 October 2025.
- **Athish Dinesh**, a 3rd-semester student, participated in HackEEE 4.0, a 24-hour national hackathon organized by PES, on 14–15 November 2025.
- **Kushal M. R.**, a 3rd-semester student, participated in the Agentic AI Hackathon, organized by IBM Watsonx Orchestrate, on 21–23 November 2025.
- **Haider Sagar Warsi**, a 7th-semester student, participated in the Adobe India Hackathon, organized by Unstop, on 5 July 2025.
- **Pramath Girish Bharadwaj**, a 3rd-semester student, participated in the Kalpavikas 1.0 Ideathon, organized by RV University, on 10–11 October 2025.
- **Pooja Todalabagi**, a 3rd-semester student, participated in Hackcelerate, a 24-hour hackathon organized by GSSSIET for Women, on 21–22 November 2025.
- **Srusti M., V. M. Skandamahima, Shambhavi, Kruthi K. Shetty, Apeksha G. S., S. N. Lalithya, Krishna Karanth G., Abhiram H., Divyashree, Adarsh Arun, Raghavendra G., Sai Hrishikesh, Rajiv S., Rakshitha Meleyyanavar, Mohith S. Kumar, Soham Samarth Rao, Rishika H. C., Tanmay Anand, Goutham B. S., Kshithija K. M., Hamsini Bhat V., Kandacharam Deepshika, Shradda M. Shetty, Abhay S., Bharath B., Yashaswini K. M., Shamitha Basavaraj, Sindhuja C. S., Aneesh M. S., Prajwal Gowda B. N., Prajwal Gowda N., Achintya K. J., Seema G. R., Vedanth C., Manoj R., Mahesh Acharya R., Mohan Gowda R., Mohith Gowda H. K., Shivana Gowda R., Sanjana Umadi, Shreya Agrawal, Kadaburu Matam Spoorthi, Kumkum Kumari, Gagan Bidaralli, Sanchita H., S. R. Anirudh, Rishith A. S., Akshath G., Sachith B. S., Poojitha B., Navya S., Rachana F. Patil, Sai Saanvi D. S., Srinivasa B. N., Vedant Vishwanath Honnangi, Vighnesh Reddy S., Chinmay Kashyap C. S., and Sriharsha Reddy T., Bhoomika R. Gowda**, participated in the IBM National Hackathon, organized by BNMIT, on 25–26 July 2025.
- **Thrisha R.**, a 5th-semester student, participated in ROS Nexus, an 8-hour hackathon organized by BNMIT, on 3 September 2025.
- **Ananya M. Kolla**, a 3rd-semester student, participated in Electrothon, a national-level hardware hackathon organized by BNMIT, on 29 August 2025.

Cultural/Sports/Competitions

- **Thanmayee M. K. (1BG23CS169)** and **Sindhura R. (1BG23CS152)**, 4th-semester students, participated in Prodothon, organized by the Zero Waste Society of India at IISc Bengaluru, on 19 July 2025, and secured 2nd place with a cash prize of Rs. 5,000.
- **Prarthana R. Karanth (1BG22CS113)**, a 7th-semester student, secured 3rd place in the VTU State-Level Yoga Competition, held at Vemana Institute of Technology, on 24 October 2025.
- **Keerthana K. (1BG23CS057)**, a 5th-semester student, participated in the MyMysuru Ideathon, held in Mysuru on 20 September 2025, and secured 3rd place with a cash prize of Rs. 12,000.
- **Aditya A. (1BG22CS007)**, **Aditya S. (1BG22CS006)**, and **Karthik G. Sharma (1BG22CS007)**, 7th-semester students, participated in the same MyMysuru Ideathon on 20 September 2025 and secured 2nd place with a cash prize of Rs. 18,000.
- **Hemanth S. Gowda (1BG23CS050)**, **K. S. Archish (1BG23CS053)**, **Krishna Karanth G. (1BG23CS062)**, and **Adarsh Arun (1BG23CS006)**, 5th-semester students, participated in HACKFUSION 1.0, organized by Maharaja Institute of Technology, Mysore, on 27–28 September 2025, and won 3rd place.
- **Shambhavi (1BG23CS136)**, **Vinutha B. S. (1BG23CS188)**, **Dhananjay S. (1BG23CS040)**, and **Achintya K. J. (1BG23CS005)**, 5th-semester students, participated in Hashnova CTF 2025, organized by HashVault, in October 2025; Dhananjay S. and Achintya K. J. secured 1st place, while Shambhavi and Vinutha B. S. secured 2nd place.
- **Chiranandan T. M. (1BG23CS034)**, a 5th-semester student, secured two gold medals in the 40th Karnataka State 2nd Para Taekwondo Championship – 2025, organized by the Davangere District Taekwondo Association, on 7–8 November 2025.
- **Daksha Mali Patil (1BG24CS037)**, **Darshan J. (1BG24CS040)**, and **Anika Shreya Raju (1BG24CS022)**, 3rd-semester students, participated in the Neurovia NEXUS 2.0 Ideathon, organized by BMSCE, on 6–7 November 2025, and secured 2nd place with a cash prize of Rs. 3,000.
- **C. Athish Shekar (1BG24CS029)**, a 3rd-semester student, won 2nd place in the WPC Powerlifting National Competition, held at Relentless Strength, Sarjapur Road, in the Under 82.5 kg (Teen 18–19) category, on 14 November 2025.
- **M. Monikha (1BG23CS079)**, **Nandu D. (1BG23CS088)**, and **Raksha R. (1BG24CS406)**, 6th-semester students, participated in the Smart India Hackathon (SIH) 2025 Grand Finale, held at the International Institute of Information Technology (I²IT), Pune, on 9 December 2025, and jointly won 1st place with a cash prize of Rs. 75,000.
- **Aneesh M. S. (1BG23CS014)**, **Deekshith M. V. (1BG23CS038)**, **Hamsini Bhat V. (1BG23CS046)**, **Kandacharam Deepshika (1BG23CS054)**, and **Kshithija K. M. (1BG23CS064)**, 6th-semester students, participated in the Eureka Cooling Track — Asia's Largest Business Model Competition, organized by the Indian Institute of Technology Bombay, held 9–12 December 2025 in Bombay, and secured the runner-up position with a cash prize of Rs. 100,000.
- **Suhas M. (1BG22CS162)**, an 8th-semester student, participated in the 14th Edition Times Thyagaraja Awards, organized by the Times of India, and was selected as a finalist. (no specific date given in source)

DO YOU KNOW ?



AI is beginning to participate in scientific discovery. Researchers are developing systems that can help formulate hypotheses, analyse results, design experiments and interact with scientific software and laboratory systems. This is leading to the emerging idea of the “AI scientist.”

Industrial Visit to BMRCL

On 17 July 2025, students from BNM Institute of Technology, CSE department visited the BMRCL training facility at Baiyappanahalli, guided by faculty coordinators. The visit began with an orientation video that reviewed Namma Metro's history and growth. The presentation noted that Namma Metro began service in October 2011 and now has an operational network of about 76.95 km, making it India's second-longest metro system. Students learned about the expansion plans (including the upcoming Yellow, Pink, and Blue lines) and observed data on ridership growth, highlighting how the metro has travel times and eased Bangalore's traffic congestion.



Skill Development Programme on “C++ Programming and Object – Oriented Design”



A three-week Skill Development Programme on “C++ Programming and Object -Oriented Design” was Organised by the Department of Computer Science and Engineering for 3rd semester students from 21 July to 09th August 2025. The program aimed to build a strong foundation in C++ Programming and OOP principles for designing efficient, modular and reusable code.

Skill Development Programme on “LevelUp Your Software Career: Coding, Testing & LeetCode Interview Prep”

“LevelUp Your Software Career: Coding, Testing & LeetCode Interview Prep” is a skill development program was organised by CSE department to strengthen the core technical abilities required in the software industry on 29th August 2025. The program focused on improving coding proficiency, understanding software testing principles, and building strong problem-solving skills through LeetCode-style interview practice. Participants gained hands-on experience with real-world coding tasks, debugging techniques, and algorithmic challenges that enhance both their technical competence and interview readiness. By the end of the program, learners were better equipped to meet industry expectations and pursue successful careers in software development.



Workshop on VMware to Cloud: Linux & AWS Bootcamp



One day workshop on “VMware to Cloud: Linux & AWS Bootcamp” was organized by Department of Computer Science & Engineering, BNMIT on 30th August 2025. The aim of the workshop was to give an overview of virtualization, highlighting its role in traditional IT infrastructure. 5th sem Students from CSE, ISE & AIML participated in the workshop. Mr. Rahul R Shet, Linux Engineer, Verifone was invited as the expert member to conduct the workshop.

Inauguration of – “BNMIT IEEE Systems, Man, and Cybernetics Society (SMCS) Student Chapter”

The Department of Computer Science and Engineering at BNM Institute of Technology (BNMIT) successfully hosted the inaugural function of the IEEE Systems, “Man and Cybernetics Society” (SMCS) Student Branch Chapter on Saturday, 30th August 2025. The event took place in Seminar Hall A215 and marked a significant step forward in fostering student engagement in systems engineering, automation, robotics, and cybernetics under the prestigious IEEE banner. The chief guest for the event was Dr. Chandrakanta Kumar, Chair of the IEEE Bangalore Section. The proceedings were presided over by Dr. S. Y. Kulkarni, Additional Director and Principal. Other distinguished dignitaries in attendance included Dr.



The workshop on “Mastering Cloud Architecture and Deployment”



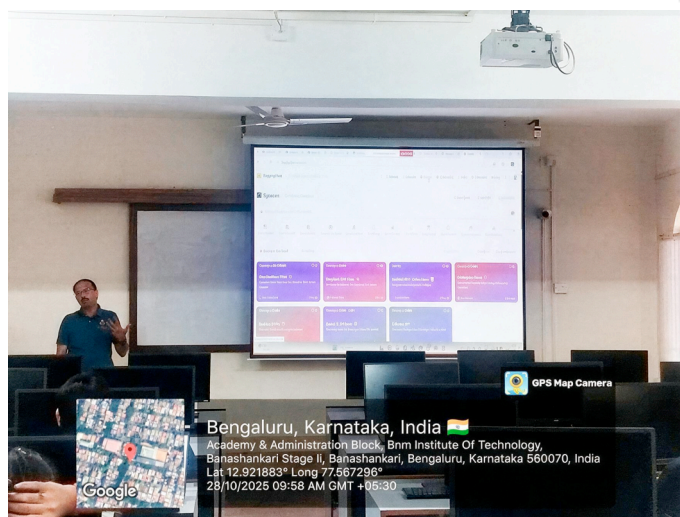
The Department of Computer Science and Engineering at BNM Institute of Technology (BNMIT) conducted a workshop on 19th September 2025 on “Mastering Cloud Architecture and Deployment”. The workshop offered a thorough introduction to essential cloud computing principles and serverless technologies, including AWS Lambda, API Gateway, and DynamoDB. Participants also explored Amazon Bedrock for AI integration using LLMs, knowledge bases, and intelligent agents. By blending theory with hands-on practice, the workshop effectively strengthened participants' cloud technology skills. It concluded successfully with highly positive feedback from attendees.

The workshop on “Algorithmic and Logical Thinking”

The Department of Computer Science and Engineering at BNM Institute of Technology (BNMIT) conducted a workshop on “Algorithmic and Logical Thinking” on 25th October 2025. The workshop aims to strengthen participants' ability to reason systematically and solve problems effectively using computational approaches. The primary objectives are to introduce methods and techniques of algorithmic thinking, problem modelling, selection of appropriate algorithm design strategies, and development and analysis of algorithms.



FDP on “Gen AI & Agentic AI: Redefining Intelligence for Tomorrow”



The Department of CSE, BNMIT has conducted a five days Faculty Development Program (FDP) on “Gen AI & Agentic AI: Redefining Intelligence for Tomorrow” from 27th - 31st Oct, 2025. The emphasis was on practical experience with AI tools, an understanding of AI ethics, and the promotion of innovation in academic settings. This FDP seeks to give educators the knowledge and skills they need to incorporate into their research, teaching, and curriculum development. This FDP has been conducted in association with Kaushalya Technologies. Kaushalya Technologies has the intention of bridging the gap between the expectation of the industry and the skills of the students/professionals.

Five Day Faculty Development Programme on Cloud Computing

The Department of CSE, BNMIT conducted a five days Faculty Development Program (FDP) from 19th Jan 2026 to 23rd Jan 2026. The FDP was organized for engineering college faculty members to enhance their academic and technical proficiency in contemporary cloud technologies. The program offered a structured and in-depth understanding of cloud computing fundamentals, including service models and deployment architectures. Distinguished resource persons from academia and industry delivered expert lectures on leading cloud platforms such as AWS, Microsoft Azure, and Google Cloud. Special emphasis was placed on hands-on sessions to enable faculty to design, deploy, and manage scalable cloud-based applications. Core topics such as virtualization, containerization, cloud security, and data management were covered comprehensively. The FDP also addressed performance optimization, cost efficiency, and best practices in cloud infrastructure management.

**B. N. M. Institute of Technology**
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Department of Computer Science & Engineering
Five Day Faculty Development Programme
Cloud Computing
In Association with
**EXCELR**
Raising Excellence

Date: 19th Jan. 2026 to 23rd Jan. 2026
Venue: Online

About the Workshop
A Faculty Development Program (FDP) on Cloud Computing was organized for engineering college faculty members to enhance their academic and technical proficiency in contemporary cloud technologies. The program offered a structured and in-depth understanding of cloud computing fundamentals, including service models and deployment architectures. Distinguished resource persons from academia and industry delivered expert lectures on leading cloud platforms such as AWS, Microsoft Azure, and Google Cloud. Special emphasis was placed on hands-on sessions to enable faculty to design, deploy, and manage scalable cloud-based applications. Core topics such as virtualization, containerization, cloud security, and data management were covered comprehensively. The FDP also addressed performance optimization, cost efficiency, and best practices in cloud infrastructure management.

Organized by

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TechTwist

TEST YOUR TECH KNOWLEDGE!

ACROSS

- 1 The instructions written by a programmer
- 3 The global system of interconnected computer networks
- 7 A small program written for a command interpreter or automation
- 8 A prepackaged set of tools and libraries for software development
- 10 A popular high level programming language named after a comedy troupe
- 11 The standard markup language for creating web pages

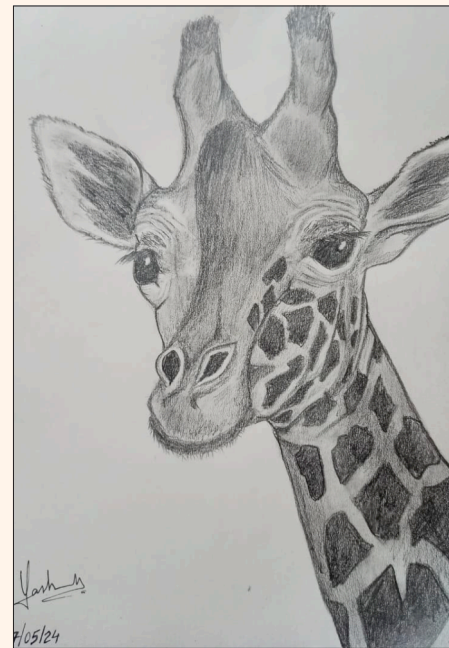
DOWN

- 1 A blueprint for creating objects in programming
- 2 To check if a program works correctly
- 4 A data structure that follows the last in first out principle
- 5 A system of numerical notation using base two
- 6 A step by step procedure for solving a problem
- 8 A data type representing a number with a decimal point
- 9 A sequence of instructions that repeats until a condition is met

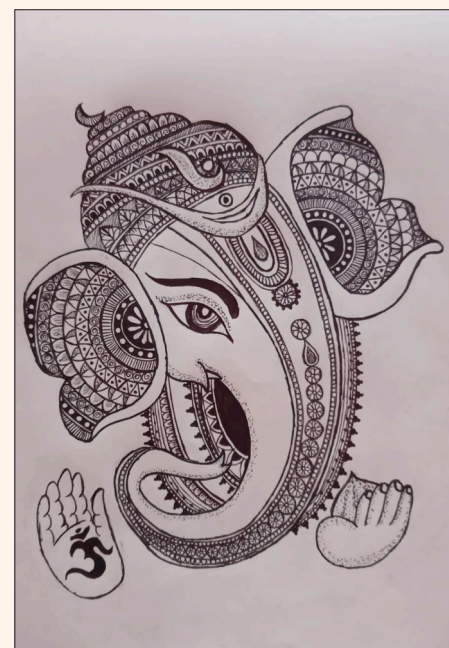
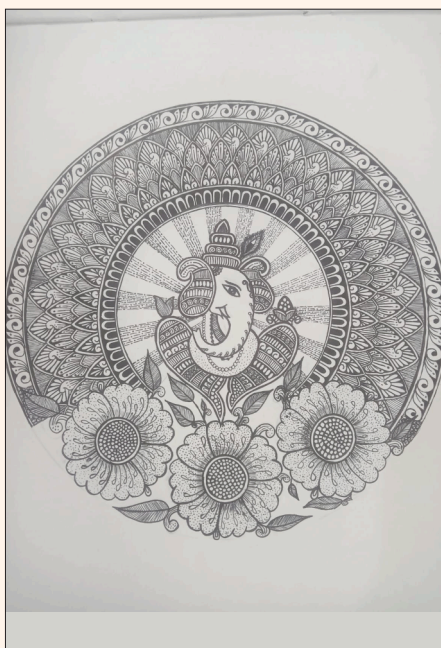
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