

VOLUME 11 ISSUE 2



NEW HORIZON
COLLEGE OF ENGINEERING

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade. Accredited by NBA

INFORMATION SCIENCE AND ENGINEERING

NEWSLETTER



I - NEWS

JANUARY-JUNE
2026

ABOUT THE DEPARTMENT



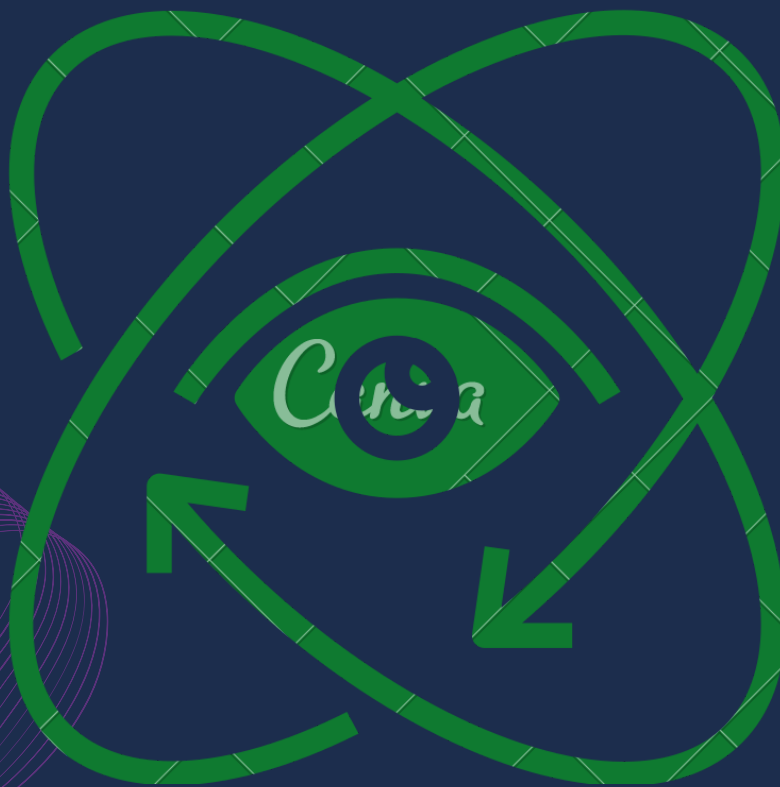
Information Science and Engineering department focuses on current Information Technology Trends, and Domain Specific Applications.

The program facilitates the evolution of skills in students to help them attain a higher degree of knowledge, global competency and Excellence, for the betterment of the society.

The Department of Information Science and Engineering at NHCE was established in the year of 2001 and offers graduate, post graduate and PhD programs. The four year B.E degree equip the students to meet day-today Technological advancements of the ever dynamic IT field through adept training on various subjects of curriculum of Information Science and engineering and beyond. The department offers B.E program through autonomous scheme from the year 2015. The department has a very good team of highly qualified and talented faculty members including Professors, Associate Professors and Assistant Professors.

VISION

To emerge as a Department of eminence in Information Science and Engineering in serving the Information Technology industry and the nation by empowering students with a high degree of technical and practical competence.



MISSION

To strengthen the theoretical, practical and ethical dimensions of the learning process by fostering a culture of research and innovation among faculty members and students.

To encourage long-term interaction between the academia and industry through their involvement in the design of curriculum and its hands-on implementation.

To strengthen and mould students in professional, ethical, social and environmental dimensions by encouraging participation in co-curricular and extracurricular activities.



MESSAGE FROM PRINCIPAL



It gives me great pleasure to give my best wishes to i-News, a Newsletter from the Department Of Information Science and Engineering Of New Horizon College Of Engineering, Bengaluru. The students and faculties of the department are always proactive in taking initiative in organizing all kinds of events. I congratulate all achievers, contributors and editorial board for bringing out such an informative newsletter. I hope this newsletter reflects all activities Of the department and inspires Others to do their best

MESSAGE FROM HOD



Welcome to i-News, the pulsating heartbeat of the ISE Department at New Horizon College of Engineering, Bengaluru. Our dedicated team of teachers and students have crafted this newsletter to showcase our remarkable achievements and vibrant activities. Within these pages, you'll discover a world of opportunities for students to engage in curricular, co-curricular, and extra-curricular activities through our various clubs. We celebrate milestones, share captivating projects, and highlight the spirit of our department. To our students, seize the gift of today and make it extraordinary. Congratulations to our faculties and editors for creating an exciting and interesting issue. Join us on this captivating journey as we shape the future together. Welcome to i-News, where possibilities come alive.



NEW HORIZON
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INFORMATION SCIENCE AND ENGINEERING

NH BYTES



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INFORMATION SCIENCE AND ENGINEERING

FEBRUARY



CYBERSECURITY CHALLENGE: CRYPTOXCAPE – DECODE TO ESCAPE



On 26 February 2026, the Department of Information Science and Engineering organised CryptoXcape – “Decode to Escape” as part of its Silver Jubilee celebrations at the ISE Department, Chhatrapathi Shivaji Block. The event was designed as a two-phase technical challenge to test participants’ logical reasoning, analytical thinking, teamwork, and cybersecurity skills.

Inspired by the theme “Now You See Me,” the event combined a scavenger hunt with a web-based Capture-The-Flag (CTF) challenge, where teams decoded clues to unlock a 4-digit security code and captured hidden flags online. Phase 1 involved collecting four numerical digits through a room-based scavenger hunt, emphasising observation, reasoning, and coordination. Phase 2, known as the Hill Capture round, required teams to apply web security concepts to identify vulnerabilities and submit flags in the required format. A total of 160 participants formed teams of four and competed for a prize pool of ₹10,000.

Scoring was based on the number of flags captured, along with speed and accuracy, creating an intense and engaging competitive environment. The event enhanced students’ problem-solving abilities, strategic thinking, teamwork, and practical understanding of cybersecurity principles. Winners were awarded prizes for their performance in both the scavenger hunt and CTF rounds.

Overall, CryptoXcape provided a hands-on platform for technical growth and experiential learning in cybersecurity for students.

The expert emphasized imagination and innovation as key drivers of next-generation mobile applications. He guided students through the stages of Ideation, Design, and Realization for building innovative solutions. An overview of blockchain technology and its integration with mobile applications was presented. The role of digital currencies in enabling secure and decentralized transactions was explained. Design thinking principles such as Empathize, Define, Ideate, Prototype, and Test were applied to mobile app development. Real-world use cases included mobile wallets, decentralized applications, and fintech solutions. The session was highly interactive, with students sharing perspectives and ideas.

Industry practices and emerging trends in blockchain and digital currencies were discussed. Feedback from participants was overwhelmingly positive, appreciating the practical examples and engaging delivery. Many students were inspired to explore blockchain-based mobile applications in projects and research. The talk concluded with encouragement for students to pursue entrepreneurial initiatives in this domain.

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APRIL



EXPERT TALK –CONNECTING THE CLOUD: SMART NETWORKS, SMARTER INFRASTRUCTURE



On 6th April 2026, the Department of Information Science and Engineering, in association with the Industry Skill Lab and Juniper Networks, organised an expert talk titled “Connecting the Cloud: Smart Networks, Smarter Infrastructure.” The session was delivered by Mr. Sarish Sethumadhavan, Senior Director at Sapiens, Bangalore. The objective of the talk was to provide students with insights into modern cloud computing technologies and the importance of intelligent networking in building efficient IT infrastructure.

The speaker explained how cloud platforms are revolutionising data management, scalability, and connectivity in the digital era. He highlighted that cloud computing offers scalable and on-demand resources through the internet. Various cloud service models such as IaaS, PaaS, and SaaS were discussed, emphasising their flexibility and control.

The role of smart networks in improving data transmission efficiency and enabling seamless cloud connectivity was elaborated. The concept of virtualisation and its importance in optimal hardware utilisation was clearly explained. The session also covered scalability and load balancing techniques for handling dynamic workloads efficiently.

Security measures required to protect data and applications in cloud environments were emphasised. Real-world applications of cloud technologies across different industries were showcased to enhance understanding. The session, attended by 62 participants, successfully enhanced students’ knowledge of cloud computing and smart networking while motivating them to explore advanced topics and career opportunities in the IT industry.

PARENT TEACHERS MEETING- VI SEMESTER 2026



The Department of Information Science and Engineering successfully conducted a Parent-Teacher Meeting for VI Semester students on 25th April 2026 in Classroom C 523, Chatrapathy Shivaji Block. The meeting aimed to create a collaborative platform for parents and faculty to discuss students' academic progress, discipline, and overall development. The session was held under the guidance of Dr. Vandana C. P., Associate Professor and Head of the Department, with active participation from faculty members, mentors, and parents.

The meeting commenced with a welcome address and introduction of faculty members, followed by an overview of the department's vision, mission, and academic objectives. Parents were briefed on student-oriented activities, institutional schemes, and the academic framework through PO and CO mapping. Detailed discussions were held on students' academic performance, attendance, and areas requiring improvement. Student achievements, including hackathon successes and notable accomplishments, were also highlighted.

Faculty members emphasised the importance of academics, projects, innovation, and teamwork, along with an overview of placement statistics and career preparedness initiatives. Class teachers presented departmental highlights covering teaching-learning practices, co-curricular initiatives, industry interactions, infrastructure, and events conducted during 2025-26. Individual parent-teacher interactions enabled personalised discussions on student performance and behaviour. Parents appreciated the initiative, shared valuable feedback, and suggested conducting such meetings regularly to support continuous student development.

INAUGURATION OF THE IEEE INFORMATION THEORY SOCIETY (ITSOC) STUDENT CHAPTER



The Department of Information Science and Engineering at New Horizon College of Engineering inaugurated the IEEE Information Theory Society (ITSoc) Student Chapter on 17th April 2026 at the NHCE Auditorium. The event brought together faculty, students, and distinguished IEEE leaders to introduce the vision, scope, and roadmap of the newly established chapter. The inaugural address by Dr Chengappa M R, Chair Elect 2026, IEEE Bangalore Section, emphasised the fundamentals of Information Theory through an engaging live demonstration illustrating noise in communication systems. He highlighted the foundational contributions of Claude Shannon and their relevance to modern digital communication.



Dr Ambar Bajpai, Chair, ITSoc Bangalore Chapter, shared insights into the society's growing presence in Karnataka and encouraged collaboration through cluster-level initiatives. He outlined upcoming opportunities such as an ITS Innovation Forum, Project Expo, and industry-oriented workshops. He also detailed IEEE membership benefits, including affordable student membership and funding support for student-led activities. A special screening of The Bit Player documentary was also announced. An interactive IEEE membership session was conducted by Mr Muzammil Pasha, Founding Chair, IEEE Entrepreneurship Bangalore Section, featuring a quiz and student recognition. The chapter's 2026 roadmap was presented by Jatin Hegde, including initiatives such as a Membership Drive, Project Expo, Research Forge, Shannon Week, and Tech Creation. Overall, the inauguration set a strong foundation for an academically vibrant, research-focused, and innovation-driven IEEE ITSoc Student Chapter at NHCE.





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ARTICLES



ANDROID BASED CROWDSOURCED REPORTING APP

The Android-Based Crowdsourced Urban Reporting App is an innovative mini project developed by students of the Department of Information Science & Engineering to improve the reporting and management of civic issues. The application enables citizens to report problems such as potholes, garbage accumulation, broken streetlights, and water leaks by uploading images, adding descriptions, and automatically tagging locations using GPS. This encourages active public participation while making issue reporting faster and more accessible.

Developed using Java, Android Studio, Firebase, and Google Maps API, the application provides secure authentication, real-time cloud storage, and accurate location tracking.

An administrator dashboard allows authorities to efficiently view, manage, and update reported issues, creating a streamlined workflow for resolving civic complaints.

The project demonstrates how mobile and cloud technologies can strengthen communication between citizens and local authorities, promoting transparency, accountability, and timely action. With scope for future enhancements such as multilingual support, notifications, and AI-based issue classification, the application has the potential to contribute towards smarter, cleaner, and more sustainable cities.



KAVYASHREE M
USN: 1NH23IS073

STARVATION-AWARE TRAFFIC SIGNAL OPTIMIZATION USING VISION BASED DENSITY ESTIMATION

The Starvation-Aware Traffic Signal Optimization Using Vision-Based Density Estimation project presents an intelligent traffic management solution designed to reduce congestion and improve traffic flow at busy intersections. Unlike conventional traffic signals that rely on fixed timers or prioritize only high-density lanes, the proposed system dynamically adjusts signal timings based on real-time traffic conditions while ensuring that low-density lanes are not subjected to excessive waiting. This approach promotes both efficiency and fairness in urban traffic management.

The system utilizes Python, OpenCV, and the YOLOv8 object detection model to analyze live surveillance camera feeds, detect and classify vehicles, estimate lane-wise traffic density, and monitor waiting times. A starvation-aware priority mechanism intelligently allocates green signal durations by considering both traffic density and waiting time, eliminating the need for expensive physical sensors while providing an adaptive and scalable solution for smart cities.

By integrating computer vision and deep learning, the project offers a practical framework for modern intelligent transportation systems. It aims to reduce congestion, minimize fuel wastage, and improve overall road efficiency while laying the foundation for future enhancements such as emergency vehicle prioritization, weather-aware traffic control, and cloud-based traffic monitoring, contributing to safer and smarter urban mobility.

STARVATION-AWARE TRAFFIC SIGNAL OPTIMIZATION USING VISION BASED DENSITY ESTIMATION

The project demonstrates how Artificial Intelligence and computer vision can be effectively applied to solve real-world urban challenges. By enabling data-driven and adaptive traffic management, it not only enhances commuter experience but also supports sustainable urban development. The proposed system has the potential to be integrated into future smart city initiatives, making transportation networks more efficient, reliable, and responsive to changing traffic conditions.



OVIYA
USN: 1NH23IS108

GARDENGUARD:REAL-TIME PEST DETECTION FOR URBAN PATCHES

GardenGuard: Real-time Pest Detection for Urban Patches is an AI-powered project developed for early pest detection in home gardens, indoor plants, and small-scale gardening environments. Unlike traditional manual inspection, the system provides continuous, automated monitoring to identify harmful pests at an early stage, helping prevent plant damage and promote healthier plant growth.

The system integrates ESP32-CAM, Raspberry Pi, YOLOv8, Artificial Intelligence, IoT, and computer vision to create an affordable and efficient smart gardening solution. The ESP32-CAM captures plant images, which are processed by the Raspberry Pi using the YOLOv8 deep learning model for real-time pest detection. When pests are detected, the system alerts users, enabling timely action while reducing manual effort and improving detection accuracy.

With its compact design, wireless communication, and low cost, GardenGuard offers a practical solution for modern plant care. The project showcases how AI and IoT can simplify pest monitoring while supporting smarter, more sustainable gardening practices and future intelligent agricultural applications.



ANITEJ MANTRY
USN: 1NH23IS019

NEUROWEAVE: TRANSFORMER-BASED EEG REPRESENTATION LEARNING AND INTERACTIVE VISUALIZATION SYSTEM

The Real-Time EEG-Based Focus Monitoring System is an innovative project that estimates a user's focus level by analyzing live EEG brain signals. The system acquires multichannel EEG data, removes noise through real-time preprocessing, and provides continuous visualization for accurate monitoring of brain activity.

Using spectral analysis of beta, alpha, and theta brainwave activity, the system calculates a focus-related biomarker and converts it into a personalized 0–100 focus score through an initial calibration process. This ensures accurate and user-friendly focus assessment across different individuals.

Designed for low-latency operation and continuous monitoring, the project combines signal acquisition, preprocessing, real-time analytics, and intuitive feedback into a complete EEG pipeline. It also provides a foundation for future applications such as cognitive performance monitoring, fatigue detection, and driver safety assistance.



VISHNUBHARGAV
DONTIREDY
USN: 1NH23IS019



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ACHIEVEMENTS



SHAASTRA 2026-ROBO WARS



Kaushik J (1NH22IS065), Harshith KM (1NH22IS051), Anirudh Wagge (1NH22IS017), Imran K (1NH23IS404) and Pranith Reddy (1NH22IS002) secured 2nd Place and received a cash prize of Rs. 45000/- along with certificates in Robowars - 15Kg at the event "Shaastra 2026" organised by Indian Institute of Technology, Madras on 5th January 2026.

ALLIANCE ONE FEST



Akash Yadav (1NH24EE009) and Asutosh Misra (1NH23IS028) secured 1st Place at the 36-Hour National Level Gameathon held at Alliance University between 19th and 21st February 2026, as a part of Alliance One fest, showcasing exceptional gaming prowess.

EDITORIAL TEAM



DR. VANDANA C P

Faculty Coordinator



DIVYA K V

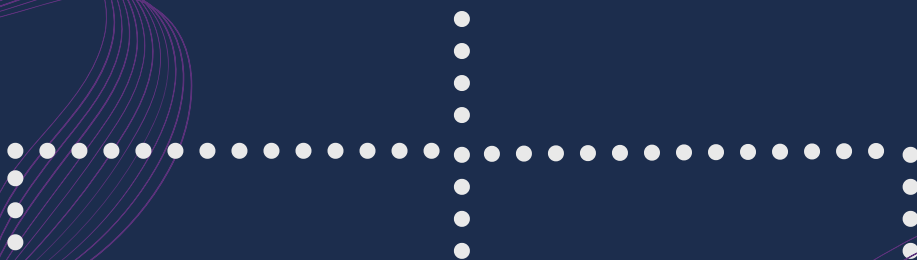


SUBHI
SRIVASTAVA



ARCHANA DAS

Students



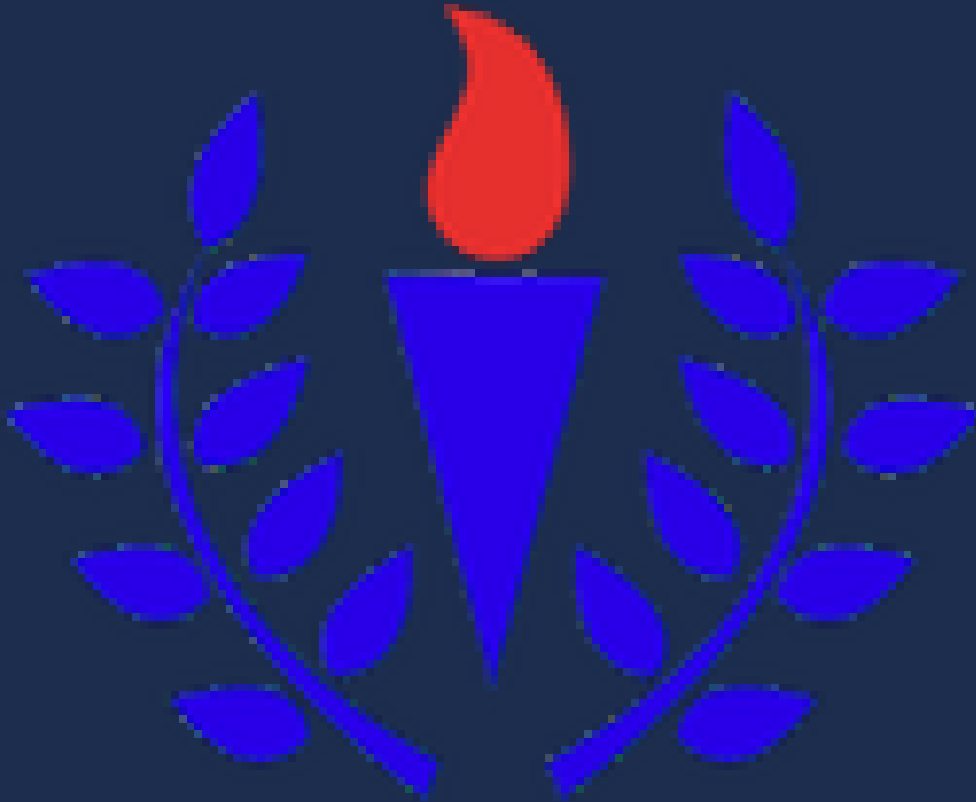
Nagareddy Thanvi



Kapisatty Tanmaya



Sriya Saravanan



DREAMERS,DOERS,THINKERS!

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Awarded Outstanding Technical Education Institute in Karnataka
