



# 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

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**JULY-DECEMBER  
2024**

# ABOUT THE DEPARTMENT

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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

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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

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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

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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

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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.



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# **CLUB** ACTIVITIES

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# CSEH- THE HACKER GAMES



The competition kicked off with Cyber Charades, a lively round that blended creativity, analytical thinking, and technical expertise. Teams deciphered technical terms using definitions and hints from photos of notable personalities, turning every guess into a burst of energy and excitement. Next came the adrenaline-fueled Tech Feud, a rapid-fire quiz that tested reflexes, communication, and teamwork under pressure. The fierce battle of wits culminated in the emergence of three finalist teams, ready to face the ultimate challenge.

The grand finale, Digital Heist, brought participants into a gripping Capture the Flag (CTF) scenario. With a storyline that revolved around cracking login credentials of a simulated website, this thrilling round tested their problem-solving skills, critical thinking, and mastery of hacking techniques. Altogether, The Hacker Games celebrated intellect, collaboration, and technical prowess, offering an enriching experience that left participants inspired to delve deeper into the fascinating world of cybersecurity.





INFORMATION SCIENCE AND ENGINEERING

# NHBYTES





INFORMATION SCIENCE AND ENGINEERING

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**JULY**

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# EXPERT TALK ON SMART CONTRACT USING BLOCK CHAIN



The Department of Information Science & Engineering, had organized a “Expert Talk On “Generative AI Use Cases in Product Lifecycle Management” on 11/07/2024 at C524, ISE Department, Chhatrapati Shivaji Block. Mr Prassanna Senthilkumar, Quality Assurance Lead, INAI Technologies the expert speaker delved on Introduction to Generative AI Use Cases, Use cases of Generative AI, Generative AI Lifecycle, PLM in AI. Also, he highlighted the utility of AI where product managers can employ human-centric designs, coupled with technological acumen, to align products more closely with business objectives and customer expectations.



## Guest Talk Objectives:

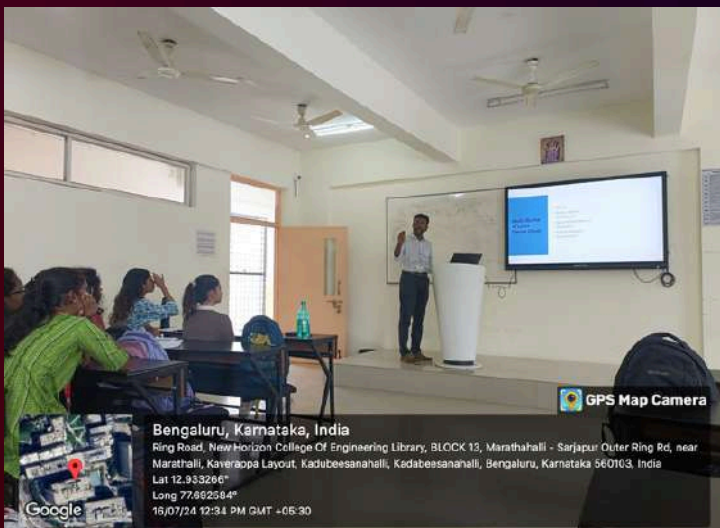
1. Introduction to Generative AI Use Cases
2. Use cases of Generative AI
3. Generative AI Lifecycle
4. PLM in AI
5. Challenges and Considerations



# EXPERT TALK ON DIVING INTO LINUX DEVICE DRIVER PROGRAMMING

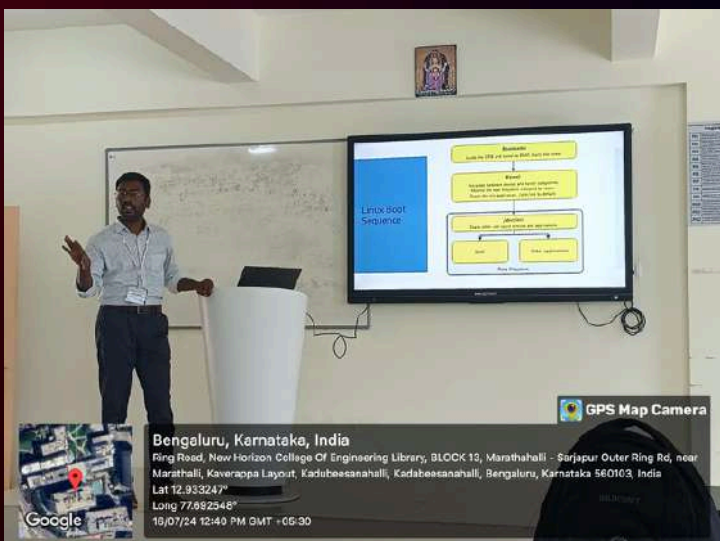


The Department of Information Science and Engineering (ISE) had organized an Industry expert talk on "Diving into Linux device driver programming" On 16 th July 2024 for the 4 th semester students. The event aimed to explore writing a software for the product using Linux device driver programming. On July 16, 2024, the department hosted Mr. S. Dinakaran a distinguished senior software engineer from Mirafra, as the keynote speaker. Dr. Vandana C.P. Associate Professor, Head of the ISE department, inaugurated the event and welcomed Mr. S. Dinakaran. She emphasized the importance of Linux device driver programming in corporate world. The event was coordinated by Prof. Mrs.K. Thamarai Selvi Assistant Professor in the ISE department, who introduced Mr. S. Dinakaran to an enthusiastic audience comprising fourthsemester students.



## TOPICS COVERED:

- Real Life Use of Linux Device Driver
- Current job opportunities
- Typical Linux Setup and Linux Boot Sequence
- Relationship between applications, the kernel, and hardware
- Role of a Linux device driver
- Device Driver Types



# EXPERT TALK ON SMART CONTRACT USING BLOCK CHAIN

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The Department of Information Science and Engineering had organized an expert talk on “Smart Contracts using Blockchain” for the fourth-semester students on July 19/07/2024. The invited expert speaker, Dr. Preethi, who is currently serving as an Assistant Professor-Senior Grade at Manipal Institute of Technology, Bengaluru, and specializes in Smart Contracts, led the talk. She addressed the students on the following topics: Understanding Smart Contracts, Benefits of Smart Contracts Applications, Challenges and Limitations, Ethereum and Smart Contracts and IDEs



## TOPICS COVERED:

- Understanding Smart Contracts
- Benefits of Smart Contracts
- Applications
- Challenges and Limitations
- Ethereum and Smart Contracts
- IDEs





INFORMATION SCIENCE AND ENGINEERING

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# AUGUST

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# INDUSTRIAL VISIT TO NATIONAL AEROSPACE LABORATORIES(NAL)

**NEW HORIZON**  
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Department of Information Science and Engineering  
Industrial Visit  
to

**CSIR - NAL**  
(National Aerospace Laboratories)  
Bengaluru

Batch - 7<sup>th</sup> Sem ISE  
22 August 2024  
9:00 AM to 12:30 PM  
XM62+9H5, HAL Old Airport Rd,  
Kodihalli, Bengaluru, Karnataka 560017

Coordinator:  
Dr. Arvind S Kapse  
Professor, ISE

Convenor:  
Dr. Vandana C P  
HOD, ISE

The Department of Information Science and Engineering had organized an Industrial visit to CSIR-NAL, Bengaluru on 22-Aug-2024 for 7<sup>th</sup> Semester students to explore and experience the workflow in software, hardware and multidisciplinary fields and interacted with engineers to understand the processes in the NAL. The industrial visit started with a brief introduction to CSIR-NAL history, and its contributions to research, software, hardware and aircraft products. The participants were then divided into 2 smaller groups and assigned guides who accompanied them throughout the visit. It was an enriching experience to the students.



## Major R&D Discipline in CSIR-NAL

- Computational fluid dynamics
- Experimental aerodynamics
- National Trisonic Aerodynamic Facilities
- Flight mechanics and control
- Propulsion
- Composites
- Structural design, analysis and testing
- Structural dynamics and integrity
- Surface modification
- Aerospace materials
- Aerospace electronics and instrumentation
- Civil aviation
- Parallel processing computers
- Meteorological modelling
- Wind Energy
- Manufacturing Technology
- Information Systems
- Electromagnetics





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**OCTOBER**

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# GUEST TALK ON ROLE OF DEVOPS IN EDGE AND CLOUD COMPUTING

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Department of Information Science and Engineering organized a guest talk on the “Role of DevOps In Edge And Cloud Computing” by Mr. Agilesh R, a Mobile Application Developer, at Giridhar Solutions Pvt Ltd. He has been developing high-performance and scalable solutions for the last 3 years. This insightful session was designed to provide both beginners and professionals with an understanding of the fundamental concepts of cloud computing, its applications, and its growing relevance in today’s digital age. The speaker described cloud computing as the delivery of computing services—servers, storage, databases, networking, software, analytics, and intelligence—over the internet, or the cloud, to offer faster innovation, flexible resources, and economies of scale.





# EXPERT TALK ON PRESENT WITH IMPACT: STORYTELLING AND SURVIVAL SKILLS FOR THE CORPORATE WORLD

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The Department of ISE organized an expert talk titled “Present with Impact: Storytelling and Survival Skills for the Corporate World” on 17th October 2024, featuring Ms. Sreeja, founder of openyourmind.in, a platform that exposes teenagers to activities and content that foster open-mindedness and critical life skills.

Before launching her entrepreneurial journey, Ms. Sreeja spent over two decades at Infosys Technologies, where she managed large teams of over 300 people delivering mission-critical programs for clients. During the session, she highlighted the power of storytelling as a key tool for engaging audiences. By weaving content into a compelling narrative, students can capture attention, make ideas more memorable, and clearly convey complex concepts. The talk included real-world examples and video clips to demonstrate how impactful presentations are built around stories that resonate. The focus of the session was to equip students with essential presentation skills and offer valuable insights into thriving in the corporate world.



# TEDx TALK ON 7 WAYS TO MAKE A CONVERSATION WITH ANYONE

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The Department of Information Science and Engineering (ISE) organized a TEDx Talk (Recorder) for 5th-semester students on 14th October 2024, featuring Ms. Malavika Varadan, Managing Director at Liveathive and a TEDx speaker. She delivered an engaging talk on “7 Ways to Start a Conversation with Anyone,” offering valuable insights to help students improve their communication skills, socialize more effectively, and build confidence in social interactions.





# GUEST TALK ON PROMPT ENGG: HOW TO COMMUNICATE WITH AI TOOLS

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The Department of Information Science and Engineering (ISE) organized a guest talk on “Prompt Engineering: How to Communicate with AI Tools” for 5th-semester students on 10th October 2024. The session was led by Mr. Harsh Jaiswal, a Data Scientist, AI/ML Engineer, and Corporate Trainer at EduCADD Training Solutions, Bangalore. Mr. Jaiswal shared his expertise in setting up a software environment with essential tools and provided an introduction to the fundamentals of prompt engineering and AI tools. His insights offered students valuable knowledge on effectively interacting with AI tools and systems.





# INDUSTRIAL VISIT TO XPERI, EMBASSY TECH VILLAGE, DEVARABISANAHALLI



The industrial visit to Xperi Corporation on October 22, 2024, provided an immersive experience for the students of the ISE department. Xperi Corporation specializes in software solutions for the entertainment industry and connected cars and is renowned for its innovative work in developing infotainment systems for homes and vehicles. Headquartered in San Jose, California, USA, the company has a global presence in 29 countries, with principal offices in Bangalore and Pune, India.

During the visit, students were reassured about privacy and data usage concerns, as Xperi complies with data regulations in various countries. The students also presented a solution to a problem involving Redis and the Jaccard algorithm. Redis was selected for its efficiency in data storage, utilizing both the Redis cache and SQL database.



# INDUSTRIAL VISIT-ACCELERON LABS, BANGALORE

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On Monday, 21st October 2024, the ISE department organized an industrial visit to Acceleron Labs in Bangalore. Acceleron Labs is a leader in battery and energy storage technologies, focusing on developing high-performance, durable, and sustainable battery solutions for various industries, including electric vehicles, grid storage, and portable power applications. Students were given an overview of the hardware components, hyper-converged infrastructure, parallel file storage, scale-out NAS, unified storage, and network-attached storage. Additionally, this visit offered important insights into internship opportunities and career development pathways within energy storage.





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**NOVEMBER**

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# REPORT ON PARENT TEACHERS MEETING- ODD SEM (A.Y.2024-2025)



The Department of Information Science & Engineering at NHCE held a Parent-Teacher Meeting on Saturday, November 9, 2024, starting at 9:30 AM in rooms C504, C506, and C524 of the Chhatrapati Shivaji Block. This meeting served as a valuable platform for parents and teachers to connect, share insights, and discuss strategies to enhance students' educational experiences and personal growth.

Guided by Dr. Vandana C. P., Head of the Department of Information Science & Engineering, the meeting focused on fostering collaboration between parents and faculty to support students in achieving their academic and personal goals. Specifically organized for the parents and teachers of students in the 3rd, 5th, and 7th semesters, the discussions centered around students' academic progress, personal development, and ways to maximize their potential.



# EXPERT TALK-AWS DEVOPS TOOLS



The poster is for an expert talk titled "AWS DevOps Tools". It features the logo of New Horizon College of Engineering at the top left, along with ISTE and CSI logos. The text "Department of Information Science and Engineering | ISTE | CSI" is below the logos. The title "Expert Talk" is in a dark blue box, followed by "AWS DevOps Tools" in large red letters. The event details are listed: "12 November 2024", "10:00 AM - 12:00 PM", "5<sup>th</sup> sem students", and "C - 503, ISE Department". A portrait of Mr. Anush G R is shown in a red hexagon. At the bottom, the names of the Faculty Coordinator (Prof. Shalini A) and Convenor (Dr. Vandana C P) are listed. Mr. Anush G R's title, "Hybrid Solutions Architect, Frontier Business Systems", is also included.

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Department of Information Science and Engineering | ISTE | CSI

**Expert Talk**

**AWS DevOps Tools**

12 November 2024  
10:00 AM - 12:00 PM  
5<sup>th</sup> sem students  
C - 503, ISE Department

Faculty Coordinator  
**Prof. Shalini A**  
Sr. Assistant Professor - ISE

Convenor  
**Dr. Vandana C P**  
Associate Professor & HoD - ISE

**Mr. Anush G R**  
Hybrid Solutions Architect,  
Frontier Business Systems

The Department of Information Science and Engineering organized an Expert Talk on “AWS DevOps Tools” for 5th-semester students on November 12, 2024. Mr. Anush G R, a Hybrid Solutions Architect at Frontier Business Solutions, was invited as the speaker for the session. He provided valuable insights into data centers, discussing aspects such as scalability, high availability, and tight coupling, along with the processes involved in cloud storage. Using real-world scenarios, he explained various architectures, including Monolithic, Microservices, and Serverless. Students also participated in a case study, where they had the opportunity to share their ideas.



# YOGA SESSION: EMPOWERING MINDS AND BODIES

A poster for a yoga session at New Horizon College of Engineering. The background is dark blue with a silhouette of a person in a yoga pose. The text is in white and yellow. The title 'Yoga Session' is in a light blue rounded rectangle. The main title 'Empowering Minds and Bodies' is in yellow. The date, time, location, and target audience are listed with icons. Faculty coordinators and convenors are listed at the bottom. A photo of Dr. Sivaramakrishnan is on the right.

**NEW HORIZON**  
COLLEGE OF ENGINEERING

Department of Information Science and Engineering  
and  
Department of Computer Science and Engineering (Data Science)

**Yoga Session**

**Empowering Minds and Bodies**

 **15<sup>th</sup> November 2024**

 **9:00 AM - 10:30 AM**

 **Indoor Stadium**

 **ISE & CSE (DS) Students**

Faculty Coordinators

**Mrs. Priya N**  
Sr. Assistant Professor, ISE

**Ms. Pallavi Nayak**  
Assistant Professor, CSE (DS)

Convenors

**Dr. Vandana C P**  
HoD - ISE

**Dr. B Swathi**  
HoD - CSE (DS)

**Dr. Sivaramakrishnan**  
Associate professor  
ISE department

The Department of Information Science & Engineering organized a Yoga Session on 15th November 2024, at the Indoor Basketball Stadium for students of the 3rd, 5th, and 7th semesters. The session, themed “Empowering Minds and Bodies,” aimed to promote physical and mental well-being while raising awareness about the holistic benefits of yoga. The event encouraged participants, including students and staff, to incorporate yoga into their daily lives to manage stress effectively and enhance focus and overall health.



# EXPERT TALK ON “AI-BASED APPROACHES TO ONLINE AND PARALLEL ALGORITHMS”

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The Department of Information Science and Engineering organized an expert talk “AI-Based Approaches to Online and Parallel Algorithms” on November 11, 2024. The session was delivered by Mr. Bhargav Gorpade, Decision Scientist at Fractal Analytics.

The talk began with an insightful overview of algorithms and the industry’s expectations for their design and analysis. Mr. Gorpade then explored the integration of AI in improving the performance and efficiency of Online and Parallel Algorithms. The session concluded with a hands-on activity where participants worked on the KMP algorithm and applied an AI algorithm (Random Forest) to optimize its functionality, offering a practical and enriching experience.

# EXPERT TALK-MICROSERVICES AND RESTFUL API

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The Department of Information Science and Engineering hosted an Expert Talk titled “Microservices and RESTful API” for 3rd-semester students on November 18, 2024. The session featured Mr. Bineet Kumar Jha, a Senior Technology Architect at Infosys in Bangalore, as the expert speaker. Mr. Jha shared valuable insights into current industry technologies for developing web services, focusing on RESTful architecture and using GitHub. He discussed storing and accessing data using serverless architecture, providing a live demonstration on incorporating libraries from Maven. Additionally, students engaged in a case study, allowing them to express their thoughts and perspectives on the topic.





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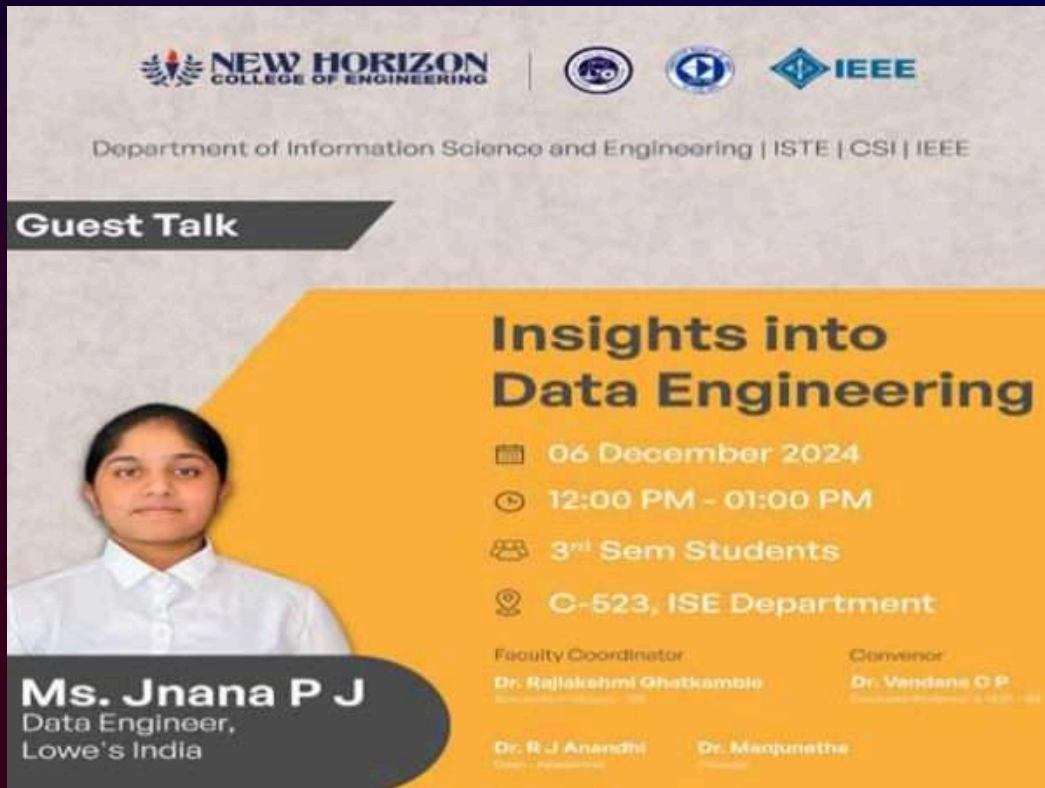
**DEC**EMBER

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# GUEST TALK-INSIGHTS INTO DATA ENGINEERING



The Department of Information Science and Engineering organized an engaging Guest Talk on “Insights Into Data Engineering” for 3rd semester students on December 6, 2024. The guest speaker, Ms. Jnana P J, a Data Engineer at Lowe’s India in Bangalore, shared her extensive knowledge and experience in the field. Her presentation offered valuable insights into the latest trends, tools, and techniques in data engineering, providing students with a deeper understanding of the subject and its practical applications in the industry.





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# ARTICLES

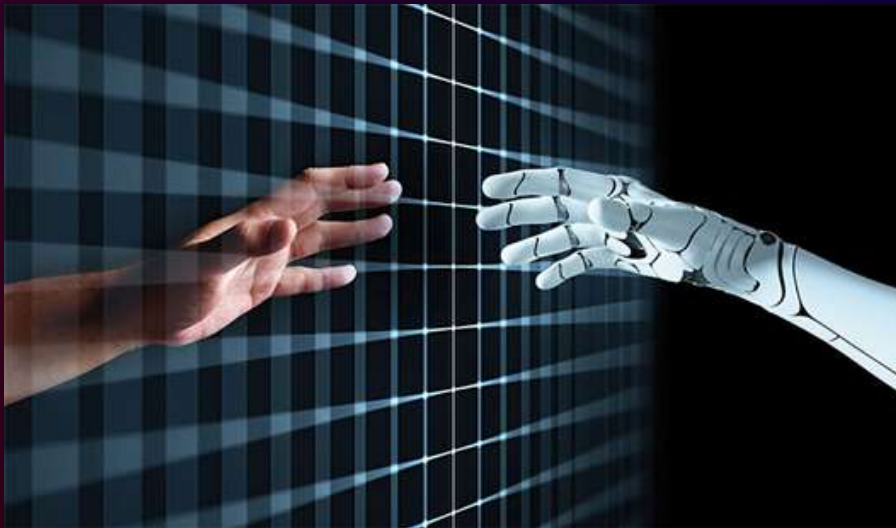
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# DIGITAL TWINS: THE FUSION OF AI, IOT AND SIMULATION FOR REAL WORLD OPTIMIZATION LM'S

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A real-time virtual representation of a system, process, or physical asset is called a "digital twin." By gathering information from sensors, Internet of Things devices, and artificial intelligence, it updates itself continually, enabling businesses to risk-free simulate, evaluate, and optimize performance.



Digital twins combine a variety of technologies:

- IoT sensors: Gather real-time information from tangible assets.
- AI & Machine Learning: Examine patterns and forecast results.
- Create a practical and aesthetically pleasing digital reproduction through simulation and 3D modelling.
- Large data sets are processed and stored by cloud computing.

Digital twins reduce the need for expensive trial-and-error techniques by simulating real-world situations and helping businesses understand how an asset will respond in various scenarios



# **DIGITAL TWINS: THE FUSION OF AI, IOT AND SIMULATION FOR REAL WORLD OPTIMIZATION LM'S**

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## **Revolutionizing Industries: The Most Powerful Applications of Digital Twins**

### **1. Healthcare: Surgery Planning & Personalized Medicine**

To mimic therapies, businesses such as GE Healthcare are building digital twins of organs. For instance, physicians can reduce trial-and-error and personalize therapies by modelling a tumour's response to chemotherapy prior to giving medications.

### **2. Production Line Optimization in Manufacturing**

Digital twins are used by industries to track machinery and anticipate malfunctions before they occur. Digital twins have been used in factories by Siemens and General Electric to reduce downtime and save millions of dollars on maintenance

### **3. Sustainable Urban Development in Smart Cities**

Digital twins are used by cities like Singapore to optimize traffic flow, energy use, and urban planning, resulting in smarter, more effective infrastructure.

### **4. Automotive: Performance Improvement & Self-Driving**

Digital twins of their vehicles are produced by companies such as Tesla, which gather real-world driving data to improve AI-driven performance, increase safety, and customize vehicle maintenance.

### **5. Aerospace: Improving Efficiency & Safety**

For many years, NASA has been simulating spaceship conditions with digital twins to ensure safe trips without putting astronauts in actual danger.

# DIGITAL TWINS: THE FUSION OF AI, IOT AND SIMULATION FOR REAL WORLD OPTIMIZATION LM'S

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Digital twins are transforming how companies plan, forecast, and create—they are not merely a fad. These virtual copies are creating a more intelligent and effective world in fields like manufacturing and medicine. The potential of digital twins is endless as technology develops.



BY:  
ARCHANA DAS  
ASSISTANT PROFESSOR

# UNDERSTANDING LLM'S

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## What are LLMs

Large Language Models are sophisticated AI systems designed to understand, generate, and interact with human language at scale. They process vast amounts of textual data, learning patterns and nuances of language.

**Core Functionality of LLMs:** LLMs excel in tasks like text generation, translation, and semantic analysis, owing to their extensive training on diverse language data. They can contextually interpret and respond to language inputs with a high degree of accuracy.

## Making and Design of LLMs:

- 1. Transformer Models-** The backbone of modern LLMs is the transformer model, renowned for its ability to handle sequential data efficiently. Transformers use self-attention mechanisms to process words in relation to all other words in a sentence, enhancing context understanding.
- 2. Training Mechanism** - LLMs are trained using techniques like Masked Language Modeling (MLM) and Next Sentence Prediction (NSP) to grasp language context and flow. This training involves feeding massive text corpora, enabling the model to learn language structures and variations.
- 3. Fine-Tuning for Specific Tasks** While pretrained on general data, LLMs can be fine-tuned with specific datasets to excel in particular domains or languages. This fine-tuning adapts the model to specialized tasks, from legal document analysis to creative writing



# UNDERSTANDING LLM'S

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## Applications Of LLMs:

- **Content Creation and Writing Assistance:** LLMs are revolutionizing content creation, aiding in writing articles, scripts, and even poetry, often with minimal human input. They offer writing assistance, improving style, grammar, and coherence in text
- **AI powered Chatbots and Generative AI** -Powering advanced chatbots, LLMs enable more natural, context-aware conversations in customer service and virtual assistance. Their ability to understand and generate human-like responses makes them ideal for interactive applications. They are also capable of Generating and Developing Images and different art forms like Ghibli art and many more.



BY - VAIBHAV KUSHWAH(USN-1NH23IS175)

# DIGITAL AFTERLIFE: WHAT HAPPENS TO YOUR ONLINE PRESENCE WHEN YOU DIE?

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In today's digital world, our online presence is as integral to our identity as our physical existence. We post, share, and engage with digital platforms daily, but what happens to our online lives when we pass away? Do our social media accounts remain indefinitely? Can artificial intelligence bring us back in a digital form? As technology advances, the concept of a "digital afterlife" raises ethical and legal dilemmas that society is only beginning to address.

## Who Controls Your Digital Legacy?

Different platforms have varying policies regarding deceased users' accounts. Facebook and Instagram allow users to assign a Legacy Contact to manage their accounts, or they can opt for memorialization, which limits interaction. Google's Inactive Account Manager allows users to designate trusted contacts who can access or delete their data. Apple's Digital Legacy program grants designated individuals access to a deceased person's iCloud data. Microsoft permits next of kin to access email data, while LinkedIn allows profile removal upon request. Twitter and YouTube require proof of death for deactivation, with few options for legacy management.

## AI and the Future of Digital Immortality

Artificial intelligence is paving the way for digital resurrection through innovations such as AI-powered chatbots like Replica, which mimic a person's communication style. Microsoft AI has developed a program that enables users to "text" with a digital replica of a deceased individual. Additionally, deepfake avatars use a person's likeness and voice to create eerily realistic representations. While these innovations aim to preserve memories, they also present ethical dilemmas: Who owns these digital ghosts? Can they be used without consent? Laws have yet to catch up with the rapid pace of technology.

# DIGITAL AFTERLIFE: WHAT HAPPENS TO YOUR ONLINE PRESENCE WHEN YOU DIE?

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## **Ethical and Legal Challenges**

Ownership of digital assets remains a key issue. Should online accounts and personal data be treated as inheritable property? Current laws remain unclear. There is also the emotional impact on loved ones to consider. While AI-generated versions of deceased individuals may offer comfort, they could also hinder the grieving process. Another concern is security. Inactive accounts are vulnerable to hacking, identity theft, and fraud, making digital estate planning essential.

## **Preparing for Your Digital Afterlife**

To ensure control over your digital presence after death, consider creating a digital will that outlines instructions for your online accounts in legal documents. Assigning a digital executor—a trusted person to manage your digital assets—can also be beneficial. Platforms like Facebook and Google offer legacy settings to manage accounts posthumously. Additionally, securing login credentials and sharing access with a designated individual, when necessary, can help safeguard your digital legacy.

## **The Future of Digital Afterlife**

As technology continues to evolve, the future may bring AI-driven memorials where users can interact with digital recreations of loved ones. Blockchain-based digital wills could enhance security and privacy in posthumous data management. Virtual graveyards in the metaverse may allow digital avatars to exist indefinitely.



# DIGITAL AFTERLIFE: WHAT HAPPENS TO YOUR ONLINE PRESENCE WHEN YOU DIE?

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## **Conclusion: Taking Charge of Your Digital Legacy**

Our online lives do not vanish when we do. Social media profiles, emails, and AI-powered replicas may preserve our digital presence long after death. While this may seem futuristic, it underscores crucial questions about data ownership and privacy. To ensure your wishes are honoured, planning ahead is key. Assigning a trusted contact, using platform settings, and securing accounts can help maintain control over one's digital legacy. Ultimately, whether you want your digital identity to persist or fade away, the choice should be yours.



BY:  
KAVYASHREE M  
1NH23IS073

# THE DARK SIDE OF SMART HOMES

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Smart homes have revolutionized modern living with devices like smart speakers, security cameras, and automated systems, offering convenience and efficiency. However, behind this ease lies a growing concern—privacy risks, cybersecurity threats, and dependence on technology that may make homes more vulnerable than ever.

Smart devices, like Amazon Echo and Google Home, listen for commands but may also record conversations without consent. Companies collect and share user data, raising concerns about privacy. Smart homes are vulnerable to hackers who can exploit weak passwords and outdated software to control devices, including locks and cameras, putting security at risk

Security cameras improve monitoring but can also be misused. Some companies store footage without consent, increasing surveillance risks. A smart home relies on the internet; outages or software glitches can render devices useless, causing inconvenience.

Beyond initial costs, many smart devices require subscriptions, and older models become obsolete, leading to continuous expenses. Companies use collected data for targeted ads, while cybercriminals can exploit vulnerabilities, leading to identity theft and surveillance concerns.



**KAVYA NAGARAJ NAIK**  
**1NH23IS072**

# THE FUTURE OF HOLOGRAPHIC DISPLAYS: FROM SCI-FI FANTASY TO EVERYDAY REALITY

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For decades, holographic displays have been a staple of science fiction, captivating audiences with their futuristic appeal. Whether it's Princess Leia's iconic hologram message in *Star Wars* or Tony Stark effortlessly designing his Iron Man suit in mid-air, these projections have always seemed like a far-off dream. However, with rapid advancements in technology, holograms are inching closer to becoming a part of our everyday lives.

## What Are Holographic Displays?

Holographic displays create three-dimensional images that appear to float in space, eliminating the need for screens or special glasses. Unlike traditional 2D displays, they use advanced light manipulation techniques to generate depth, making digital content appear more lifelike and interactive.

## How Close Are We to Real Holograms?

In recent years, several breakthroughs have pushed holographic technology closer to mainstream use. Some of the most exciting developments include:

### 1. Glasses-Free Holograms:

Companies like Looking Glass and Light Field Lab are pioneering holographic displays that don't require headsets or special glasses. These displays use sophisticated optics to create realistic, high-resolution 3D visuals that can be viewed from multiple angles..

### 2. AI-Enhanced Holography:

Artificial intelligence is revolutionizing holograms by making them more interactive and responsive. AI can enhance real-time rendering, allowing holograms to move and react based on user input. This could redefine virtual meetings, gaming, and medical imaging



# THE FUTURE OF HOLOGRAPHIC DISPLAYS: FROM SCI-FI FANTASY TO EVERYDAY REALITY

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## 3. Holographic Smartphones

Tech giants like Apple and Samsung are exploring ways to integrate holographic projection into mobile devices. Imagine checking notifications, navigating maps, or watching videos in 3D without needing a physical screen.

## Real-World Applications of Holographic Displays

### 1. Healthcare

Surgeons can use 3D holograms to visualize organs, plan complex procedures, and enhance medical training. This can lead to more precise surgeries and better patient outcomes.

### 2. Education

Holographic technology can make learning more immersive. Instead of reading about history, students could watch holographic reenactments. Science classes could feature interactive 3D models of atoms, planets, or the human body.

### 3. Entertainment and Gaming

Holographic concerts, such as Tupac's virtual performance at Coachella, have already demonstrated the potential of this technology. In gaming, holograms could bring characters into the player's physical space, creating next-level immersive experiences.

### 4. Business and Communication

Virtual meetings could evolve beyond video calls. Instead of staring at a screen, business professionals could interact with life-sized holographic projections of colleagues, making remote collaboration more engaging and personal.

# THE FUTURE OF HOLOGRAPHIC DISPLAYS: FROM SCI-FI FANTASY TO EVERYDAY REALITY

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## Challenges Holding Holographic Technology Back

Despite the excitement, there are still hurdles preventing holographic displays from becoming mainstream

- **High Costs** – The technology remains expensive, limiting its accessibility.
- **Processing Power** – Creating high-quality, real-time holograms requires significant computing power.
- **Energy Consumption** – Holographic displays demand more power than traditional screens, making them impractical for mobile use.

However, as technology continues to evolve, these challenges are gradually being addressed. Innovations in AI, optics, and energy-efficient hardware are making holograms more viable for everyday use.

## Conclusion

Holographic displays are no longer just a futuristic fantasy—they are on the brink of transforming the way we interact with digital content. Whether it's in education, healthcare, entertainment, or business, holograms have the potential to revolutionize multiple industries. The question is no longer *\*if\** holographic displays will become part of our daily lives, but *\*when\**. And with the pace of technological progress, that day might arrive sooner than we think.



Name: Sai Sumukh G S

USN: 1NH21IS131



**NEW HORIZON**  
**COLLEGE OF ENGINEERING**

INFORMATION SCIENCE AND ENGINEERING

# ACHIEVEMENTS





# ACHIEVEMENTS

## STUDENTS ACHIEVEMENT NATIONAL LEVEL 24 HOURS ROBOTHON EVENT



We are glad to share that our 4th semester students secured 4th place out of 60 teams in National level 24 hours Robothon event held at Jyothi Institute of Technology jointly organized with IIT Bombay and Eyantra labs on 5th and 6th of July 2024 .

1NH22ISO65(KAUSHIK JT)

1NH22ISO51(HARSHITH)

1NH23IS404(IMRAN K)

## STUDENTS ACHIEVEMENT IN POWERLIFTING CHAMPIONSHIP

We are incredibly proud to announce that NHCE secured overall championship runners up trophy (women) 🏆 at VTU state level intercollegiate Powerlifting Championship Men and Women 2024-25. ROSHNI JOSHI ( 52kg category) R NEHA REDDY ( 63 kg category) of ISE department secured Bronze medal in the respective category. Their dedication, strength, and perseverance have paid off in a big way.



# ACHIEVEMENTS

## CODIFY -TECHTONIC '24



We are glad to announce that Vinayak Sonar (USN: 1NH21IS178) has secured the 2nd runner-up position in the Codify competition at TechTonic '24, a National-level technical competition organized by Dayananda Sagar Academy of Technology and Management sponsored by Oracle and Cyberange .

## STUDENTS ACHIEVEMENT IN CHESS CHAMPIONSHIP 2024-2025

We are glad to announce that NHCE Women's Team Vinutha M Devadiga (1NH22IS188), K Sinchana (1NH22IS061), K N Meghana (1NH22IS060) Won Third Place in VTU Inter Collegiate Bengaluru Division Chess Championship which was held on 16th and 17th at BMSCE. Vinutha M Devadiga (1NH22IS188) got 5th position in VTU Trails Organized by VTU and got selected for VTU Chess Women's Team and will be Representing VTU Team in All India South Zone University Chess Championship 2024-2025





# ACHIEVEMENTS

## STUDENTS ACHIEVEMENT IN CODE FOR GOOD 24HRS HACKATHON



Sumit kumar (NH22IS192) ISE-4C participated in JP Morgan – Code for Good 24hrs Hackathon, held on the 27th of July. A team of 7 members from all over India was created along with 2 mentors and reached the finals, and were runner up in the hackathon.

## NATIONAL LEVEL ELECTRIC BIKE DESIGN CHALLENGE

Team Akruth won awards in the Best Innovation and Best Endurance Test categories at the National Level Electric Bike Design Challenge, held between 24 and 27 September 2024 at Sri Ramakrishna Institute of Technology, Coimbatore. Congratulations 🌸🌸🌸 to Gurusaran and Vishal V from ISE final year, 7C. Your hard work and dedication to Team Akruth make us incredibly proud.





# ACHIEVEMENTS

## NATIONAL LEVEL TECHNICAL HACKATHON



We are happy to share that our students of 7th semester M Shivani Kashyap (1NH21IS083) and Yashas D (1NH21AI123) from the ISE & AIML departments won 2nd prize at the HACK KSHETRA'24 National Level Technical Hackathon, held at Vidyavardhaka College of Engineering, Mysuru, on October 25th and 26th, 2024. The team received a cash prize of Rs.7000/-.

## HACKATHON WINNERS FROM ISE DEPARTMENT

We are thrilled to announce the remarkable achievement of our students from the Department of Information Science and Engineering at New Horizon College of Engineering! Competing against 50 teams, our talented students secured 1st place at the prestigious Hackathon, hosted by Atria Institute of Technology in collaboration with masterSolis on November 7th and 8th, 2024.



# ACHIEVEMENTS

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## ISE STUDENTS SHINE WITH "ZENSNAP" AT INTERDISCIPLINARY PROJECT EXHIBITION



Darshan D Madiwalar and Shreya R Varur, students from the Information Science and Engineering (ISE) department, have earned remarkable recognition for their innovative project "Zensnap: AI Image Creation and Auto Social Posting Engine." Their project won the Best Project award at the interdisciplinary exhibition organized by the Department of Computer Science and Engineering (Data Science) on November 27, 2024.

## HAWKEYE ROBOTICS TEAM TRIUMPHS AT ROBO SUMO EVENT

Another remarkable achievement for the Robotics team "Hawkeye" from the Information Science and Engineering (ISE) department! The team secured both 1st and 2nd place in the ROBO SUMO event held at RV College on December 4, 2024. This outstanding performance highlights their exceptional skills and dedication to robotics. Congratulations to the team for their impressive success!





# ACHIEVEMENTS

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## VTU INTER-COLLEGIATE DIVISION LEVEL TOURNAMENT-TUG OF WAR



Kushal, Kishore, and Manish, students from the Information Science and Engineering department, achieved the Runner-Up position in the Men's Tug of War event at the VTU Inter-Collegiate Division Level Tournament. This tournament was held at CMR Institute of Technology on December 9th and 10th, 2024.

## NEW HORIZON CUP 2024 - WOMEN'S BASKETBALL



"Great teams aren't born—they're built through passion and perseverance on the court.

"Congratulations to Angelina Dominic (1NH23IS018), Dhriti Narayan (1NH23IS043), and Sai Harika Pabbathi (1NH23IS144) from 3rd-semester ISE at New Horizon College of Engineering for achieving the runners-up position in the New Horizon Cup 2024 Basketball (Women's) event!

Your determination and teamwork have set a shining example of excellence. Well played, champions!



# ACHIEVEMENTS

## NHCE CUP 2024 ACHIEVEMENT



We are excited to announce that Puneeth S Nagur (1NH24IS411) and his team have secured the runner-up position in the Kabaddi tournament at the NHCE Cup 2024! This remarkable achievement showcases their dedication, teamwork, and exceptional athletic skills.

## ALL INDIA SOUTH ZONE UNIVERSITY CHAMPIONSHIP 2024- CHESS WOMEN'S TEAM



We are proud to announce that Vinutha M Devadiga represented the VTU Chess Women's Team at the All India South Zone University Championship 2024, held at Gitam University, Vishakapatnam. Her exceptional performance contributed to VTU securing an impressive 7th place out of 56 participating universities.

This remarkable accomplishment showcases Vinutha's dedication, strategic thinking, and outstanding skills in chess. Competing at such a high level and achieving a top position is a testament to her hard work and perseverance.

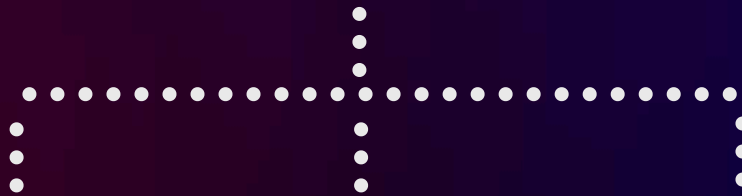
# EDITORIAL TEAM

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DR. VANDANA C P

Faculty Coordinator



DIVYA K V

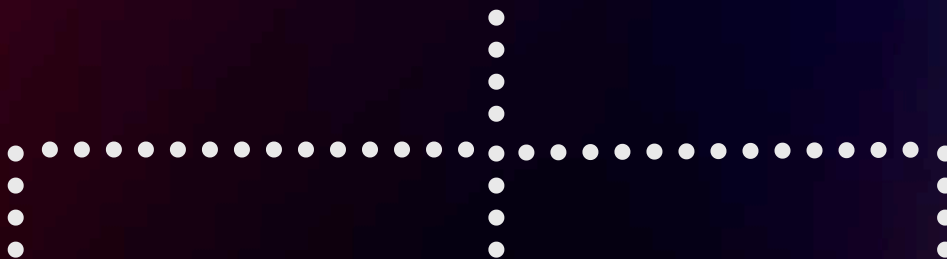


SUBHI  
SRIVASTAVA



ARCHANA DAS

Students



SHUBHOSHISH ROY



THARAKESHWAR S



LIKITH K



## DREAMERS,DOERS,THINKERS!

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