



Vision of the Department

To inspire and educate female students in Computer Science and Engineering to become skilled, ethical, and innovative professionals prepared for future technologies and challenges.

Mission of the Department

- M1: To provide strong foundational and advanced knowledge in core areas of Computer Science and Engineering, enabling students to design, analyse, and solve engineering problems using modern Computing tools.
- M2: To promote research skills, innovation, entrepreneurship and lifelong learning by encouraging students to participate in research, development, and interdisciplinary activities in emerging technologies.
- M3: To inculcate professional ethics, social responsibility, and sustainable practices, enabling graduates to contribute positively to society.

Program Educational Objectives

- PEO1: To acquire logical and analytical skills in core areas of Computer Science & Information Technology.
- PEO2: To adapt new technologies for the changing needs of IT industry through self-study, graduate work and professional development.
- PEO3: To demonstrate professional and ethical attitude, soft skills, team spirit, leadership skills and execute assignments to the perfection.

Program Specific Outcomes

- PSO1: **Software Development:** Ability to grasp the software development life cycle of software systems and possess competent skill and knowledge of software design process.
- PSO2: **Industrial Skills Ability:** Ability to interpret fundamental concepts and methodology of computer systems so that students can understand the functionality of hardware and software aspects of computer systems.
- PSO3: **Ethical and Social Responsibility:** Communicate effectively in both verbal and written form, will have knowledge of professional and ethical responsibilities and will show the understanding of impact of engineering solutions on the society and also will be aware of contemporary issues.

EDITORIAL BOARD

Dr. B Phijik, HOD (CSE)

Mrs. V. Suzan Shalini, Assistant Professor, BS&H.

Mrs. Amulya Rachna, Assistant Professor, CSE.

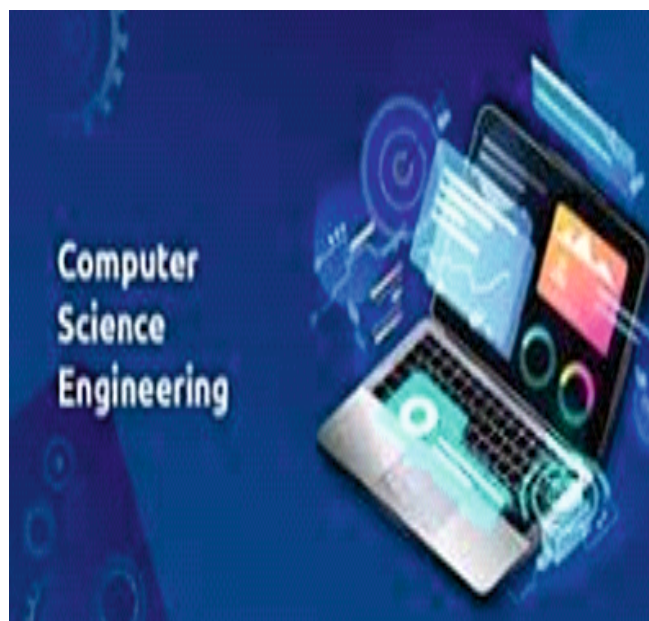
Ms. Jiya Batra, CSE (Student)

Ms. Ch Deepika, CSE(Student)

Ms. Nimitha Cirsaganagandla, CSE(Student)

Ms. Aishwarya Bulusu, CSE(Student)

COMPUTER SCIENCE AND ENGINEERING



Established in 2008, the CSE Department at VMTW has grown from an intake of 90 to 240 students, reflecting its commitment to excellence. The department earned NBA accreditation in 2019 and reaccreditation in 2022, ensuring high academic standards.

With experienced and research-driven faculty, the department promotes innovation through Centres of Excellence in IoT and AI & ML and collaborations with MSME, ALEAP, and TASK. Active associations with ISTE, CSI, and IETE enrich student learning through workshops and seminars.

Boasting 90% placements in leading companies like Amazon, Flipkart, Accenture, and Cognizant, and a highest package of ₹ 20 LPA, the department stands as a hub of innovation, research, and success.



HOD'S MESSAGE

Dr. Phijik Battula,

Associate Professor &
HoD, DEPARTMENT OF
COMPUTER SCIENCE AND
ENGINEERING

Dr. Phijik Battula brings over 20 years of academic and research experience to his role as Associate Professor and Head of the Department of Computer Science & Engineering at Vignan's Institute of Management and Technology for Women (VMTW), Hyderabad. He earned his Ph.D. in Computer Science from Osmania University, Hyderabad in 2023. He holds an M.Tech. in Computer Science and Engineering from Jawaharlal Nehru Technological University Hyderabad (JNTUH). Dr. Battula's expertise spans Computer Networks, Software Engineering, Operating Systems, Machine Learning, and Blockchain Technologies. He has made significant scholarly contributions, including: 3 national patents, 1 authored book, 10 journal publications, including 1 in SCIE-indexed journal, 4 in SCOPUS-indexed journals, 5 in UGC- approved journals, 2 international conference papers. He also served as an Academic Counsellor with the Indira Gandhi National Open University (IGNOU), Regional Services Division, Maidan Garhi, New Delhi, through Aurora Degree College Study Center (Code: 0111), Hyderabad. A dedicated mentor and educator, Dr. Battula has guided over 100 B.Tech graduates from VIGNAN's Group Institutions, Hyderabad. He is an active member of several professional organizations, Life Member, Indian Society for Technical Education (ISTE) – LM-137313, Life Member, International Association of Engineers (IAENG) – Member No: 277087, Life Member, Society of Digital Information and Wireless Communication (SDIWC) – ID: 30616.

EVENTS AT DEPARTMENT

IBM Skill Build Workshop

The Department of Computer Science and Engineering organized an IBM Skill Build Workshop aimed at enhancing students' technical and professional skills. The session provided valuable insights into emerging technologies and industry-relevant tools offered through the IBM Skill Build platform. Participants gained hands-on experience in domains such as Artificial Intelligence, Cloud Computing, Data Analytics, and Cybersecurity, helping them bridge the gap between academic learning and real-world applications.



The workshop encouraged students to explore online learning resources, complete guided projects, and earn digital badges that strengthen their employability. Overall, the event proved to be an enriching experience, fostering innovation and preparing students for future technological challenges.



Participation in Vigyan Vaibhav – 2025

Students from the Department of Computer Science and Engineering enthusiastically participated in “Vigyan Vaibhav – 2025”, a grand event organized by the Defence Research and Development Organisation (DRDO) as part of the National Science Day celebrations held from 28th February to 2nd March 2025.

The event focused on the theme “Empowering Indian Youth for Global Leadership in Science and Innovation for Viksit Bharat.” It served as an inspiring platform for young minds to explore advancements in science, technology, and innovation. Students had the opportunity to interact with eminent scientists and gain valuable insights into India's scientific progress and defence research initiatives.

The participation provided a great learning experience, motivating students to pursue innovation-driven careers and contribute to the vision of a self-reliant and technologically advanced nation.



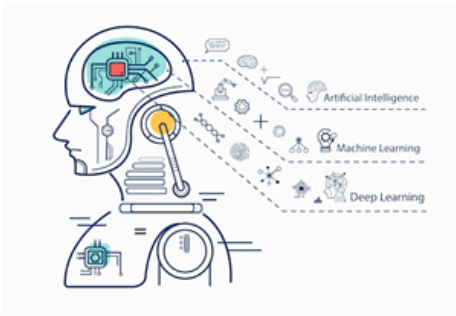
FACULTY ARTICLE ON DEEP LEARNING – THE DRIVING FORCE BEHIND INTELLIGENT SYSTEMS

By Mrs Tavya Sri, Assistant Professor (CSE)

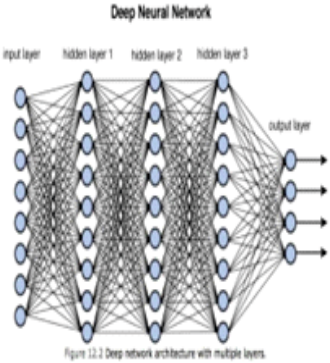
Deep Learning – The Driving Force Behind Intelligent Systems



Deep Learning, a subset of Artificial Intelligence (AI) and Machine Learning (ML), has become a cornerstone of modern computational intelligence. It focuses on algorithms inspired by the structure and function of the human brain, known as artificial neural networks. These networks enable machines to automatically learn representations from large volumes of data and make intelligent decisions without explicit programming.



With advancements in GPU computing, cloud infrastructure, and large-scale datasets, deep learning models have grown deeper and more powerful. However, challenges such as high computational cost, data dependency, and model interpretability remain active research areas.



Deep learning continues to redefine the boundaries of technology—enabling smart assistants, self-driving cars, healthcare diagnostics, and countless innovations that shape the future of intelligent systems.

FACULTIES ACHIEVEMENTS

Sl No	Name of the faculty	Event Type	Date of event	Mode of attending
1	Mrs. Amulya Rachna	FDP- AI Tools	17th to 21st Feb 2025	Online
2	Mrs B Mamatha	FDP- AI-expert systems and large language models	3rd to 8th Feb 2025	Online
3	Mrs Amulya Rachna	Workshop- AI fundamentals	Feb 02, 2025	Online
4	Mrs Bhanusri	FDP- Gen AI & Chat GPT Application in the Industry	27th to 31st Jan 2025	Online

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At its core, deep learning leverages multi-layered neural networks to extract hierarchical features—from simple patterns like edges and colors to complex structures such as objects or speech. Techniques such as Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), and Transformers have achieved breakthroughs in areas like computer vision, natural language processing, autonomous systems, and predictive analytics.

STUDENT ARTICLE ON THE INTERNET OF THINGS (IOT) – CONNECTING THE WORLD SMARTER

By, Jiya Batra IV year (CSE)



The Internet of Things (IoT) is revolutionizing the way we live and interact with technology. It connects everyday devices—like smartphones, vehicles, home appliances, and even wearable gadgets—to the internet, enabling them to communicate, share data, and work intelligently. From smart homes that adjust lighting automatically to health monitoring devices that track vital signs, IoT is making life more convenient and efficient.

What is IoT?

- IoT connects billions of devices worldwide
- Devices include smart home gadgets, health trackers, industrial sensors
- Enables real-time data sharing and analytics

In industries, IoT plays a vital role in automation, agriculture, healthcare, and smart cities, driving innovation and sustainability. As technology continues to evolve, IoT stands at the forefront of the digital revolution, shaping a smarter, more connected future.

STUDENT PROJECTS

PROACTIVE COMPLAINT MANAGEMENT IN PUBLIC SECTOR INFORMATICS

Bereddy Sushma (22UP1A0518)

Proactive complaint management in public sector informatics represents a strategic shift from "firefighting" to "forecasting." In the public sector, digital services—ranging from tax portals to healthcare registries—serve as critical infrastructure for millions. When these systems fail or confuse users, the result is a flood of formal grievances. Proactive management involves identifying potential user friction, system bottlenecks, or technical bugs before they escalate into official complaints. By leveraging real-time data monitoring and user behavior analytics, government agencies can address systemic weaknesses early, thereby enhancing administrative efficiency, reducing operational costs, and, most importantly, building public trust in digital governance.



Existing Systems

Historically, public sector complaint handling has been strictly reactive, relying on manual processes where citizens must formally submit grievances via phone, email, or physical forms. Existing systems like CPGRAMS (Centralized Public Grievance Redress and Monitoring System) or basic municipal portals often act as mere digital repositories for complaints. These legacy systems typically use keyword-based filtering

or manual categorization, which are resource-intensive and prone to human error. Because they only trigger a response after a failure has occurred, they suffer from high volumes of repetitive complaints and long resolution times, leaving little room for systemic improvement or preventive maintenance.



Proposed System

The proposed system is an AI-powered, end-to-end framework that transforms interaction logs and system metrics into actionable, preemptive insights. It features a real-time dashboard that integrates semantic pattern recognition and anomaly detection. Unlike static portals, this system monitors live user interaction data—such as high click-through rates on "help" buttons or sudden drops in form completions—to flag emerging usability barriers. By automatically harmonizing heterogeneous user narratives through machine learning, the system can identify latent issues and trigger automated remediation, such as dynamic UI adjustments or server load balancing, preventing a single technical glitch from becoming a widespread public relations crisis.



Methodologies Used

The methodology centers on a hybrid approach combining Natural Language Processing (NLP) and Machine Learning (ML) within the CRISP-DM framework. It utilizes BERT-based sentence embeddings to convert unstructured text into high-dimensional vectors, followed by K-Means clustering to identify recurring themes in user feedback. For classification, algorithms like Random Forest or Gradient Boosting are trained to assess the severity and urgency of potential issues. Additionally, Sentiment Analysis is applied to social media and forum data to capture "unofficial" grievances. Root Cause Analysis (RCA) techniques, such as the "5 Whys" and "Fishbone Diagrams," are then automated to trace anomalies back to specific software components or policy gaps.



Decentralized crime reporting using blockchain

Bodli Vyshnavi (22UP1A0523)

Decentralized crime reporting using blockchain is a transformative approach to law enforcement that prioritizes data integrity, transparency, and whistleblower anonymity. In a standard reporting environment, the fear of retaliation or lack of faith in authorities often prevents victims from coming forward. By leveraging a distributed ledger, this system ensures that once a crime is reported, the record becomes immutable and globally accessible to authorized stakeholders, such as judicial bodies and human rights organizations. This decentralized architecture removes the "gatekeeper" role of centralized police stations, ensuring that every First Information Report (FIR) is permanently time-stamped and cannot be deleted or manipulated by corrupt officials.



EXISTING SYSTEMS

Current crime reporting systems are largely centralized and paper-heavy, making them highly vulnerable to internal corruption and procedural delays. According to recent findings, a significant percentage of filed complaints "disappear" or are unauthorizedly modified within centralized police databases. These legacy systems represent a "single point of failure"; if a local server is breached or a physical file is destroyed, the evidence is lost forever. Furthermore, the reporting process often requires physical presence at a police station, which can be intimidating for victims. The lack of real-time tracking also leaves citizens in the dark regarding the status of their cases, leading to a deep erosion of public trust in the justice system.



Proposed System

The proposed system implements a decentralized FIR registration and monitoring framework built on the Ethereum or Hyperledger Fabric blockchain. It utilizes a "Digital Twin" strategy for evidence, where descriptive data is stored on-chain while heavy media files (like videos or photos) are stored in a decentralized storage layer like IPFS (InterPlanetary File System). Each report is governed by a Smart Contract that automatically classifies the crime (e.g., FIR vs. Non-Cognizable) and triggers notifications to relevant jurisdictional officers. This architecture provides a role-based access control system, ensuring that

while the existence of a report is transparent, sensitive personal details are only visible to verified investigators and judges, creating a tamper-proof chain of custody.



CAMPUS RECRUITMENT				
Sl No	Company Name	Package	Designation	No. of CSE Students placed
1	Open text	11 LPA	Software developer	1
2	Capsitech	6 LPA	Full stack developer	3
3	Deloitte	4.12 LPA	Admm Analyst	1
4	Aurus Inc	4 LPA	Software developer	

Placed Students Poster

SUCCESS STORIES
2024-2025

Batch: 2024-25

EMPOWERING WOMEN

WITH PACKAGE:
11 LAKHS PER ANNUM

opentext

Congratulations!

SUCCESS STORIES...
Batch: 2024-25

Congratulations!

14 STUDENTS HAS BEEN SELECTED FOR

WITH PACKAGE:
4 LAKHS PER ANNUM

VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

EMPOWERING WOMEN

AURUS UNIFIED PAYMENTS PLATFORM

SUCCESS STORIES...
Batch: 2024-25

Congratulations!

5 STUDENTS HAS BEEN SELECTED FOR

WITH PACKAGE:
4.12 LAKHS PER ANNUM

VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

EMPOWERING WOMEN

Deloitte

SUCCESS STORIES...
Batch: 2024-25

Congratulations!

4 STUDENTS HAS BEEN SELECTED FOR

WITH PACKAGE:
6 LAKHS PER ANNUM

VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

EMPOWERING WOMEN

Capsitech

Program Outcomes (Adapted from NBA)

Engineering Graduates will be able to:

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

Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and Engineering sciences.

Design/Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health safety, and the cultural, societal, and environmental considerations.

Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions

Modern Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of, and need for sustainable development.

Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.

Project Management and Finance: Demonstrate knowledge and understanding of the engineering management principles and apply these to one's own work, as a member and leader in a team to manage projects and in multidisciplinary environments.

Life-Long Learning: Recognize the need for and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.