



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 Cirasaganandla, 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 Indra 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

HMA Leadership Conclave 2025

Faculty and students from the Department of Computer Science and Engineering participated in the HMA Leadership Conclave 2025, organized by the Hyderabad Management Association (HMA) on 8th February 2025 at Hotel Marigold, Begumpet.



The event, themed “Inspire, Innovate, Impact,” brought together eminent leaders, industry experts, and academicians for insightful discussions on emerging trends, innovative strategies, and impactful leadership practices. It served as a valuable platform for students to gain exposure to real-world management perspectives and leadership excellence.

CSE Carnival at fest PRAJWALAN 2025

The Computer Science and Engineering (CSE) Department organized an exciting CSE Carnival as part of the college fest, showcasing the department's innovation and creativity. The event featured interactive stalls, project exhibitions, and live demonstrations by students and faculty members, highlighting cutting-edge technologies and research. From AI-based applications to hardware prototypes and fun coding challenges, the carnival offered visitors a glimpse into the diverse work and achievements of the CSE community. It served as a platform for collaboration, learning, and celebrating the spirit of technology and teamwork within the department.





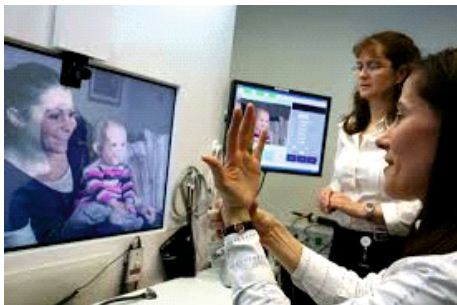
FACULTY ARTICLE ON REVOLUTIONIZING MODERN HEALTHCARE THROUGH TECHNOLOGY

By, Mrs P Rupa, Assistant Professor
(CSE)

Revolutionizing Modern Healthcare through Technology



The integration of advanced technologies is transforming the global healthcare landscape, making it more efficient, personalized, and accessible. Innovations in Artificial Intelligence (AI), Internet of Things (IoT), Big Data Analytics, and Biotechnology are revolutionizing the way diseases are diagnosed, treated, and prevented.



AI-driven diagnostic tools now assist doctors in detecting illnesses such as cancer and heart disease with

remarkable accuracy. Wearable IoT devices continuously monitor patients' vital signs, enabling real-time health tracking and early detection of medical conditions. Big Data analytics empowers healthcare providers to analyze patient data, predict disease outbreaks, and optimize treatment plans.



Moreover, robotic surgeries, telemedicine, and genomic research are bridging gaps in healthcare delivery, making precision medicine a reality. As digital innovation continues to evolve, the synergy between technology and medicine promises a future where healthcare is not only curative but also predictive and preventive.

FACULTIES ACHIEVEMENTS

SI No	Name of the faculty	Event Type	Date of event	Mode of attending
1	Mrs Amulya Rachna	FDP- AI/ML: Foundations, real world applications & sustainable development	24th March to 04th april 2025	Online

FACULTY PUBLICATIONS

SI No	Author	Title	ISSN No	Journal name
1	Mrs M Parimala	Harvestify Crop Disease Prediction and Recommendation"Intern ational Journal of Scientific Research in Engineering and Management		IJSREM
2	Mrs M Parimala	"co Track: Enabled Waste Fill-Level & Moisture Monitoring"International Journal of Scientific Research in Engineering and Management		IJSREM
3	Mrs B Mamatha	An Automatic System for Medicinal Plant Identification Using ResNet- CNN	2582-3930	IJSREM
4	Mrs B Mamatha	Revolutionizing Toll Collection with Automatic Number Plate Detection Systems	2582-3930	IJSREM

STUDENT ARTICLE ON NAVIGATING THE FUTURE WITH VIBE ENGINEERING

By, Ch Deepika, III year (CSE)

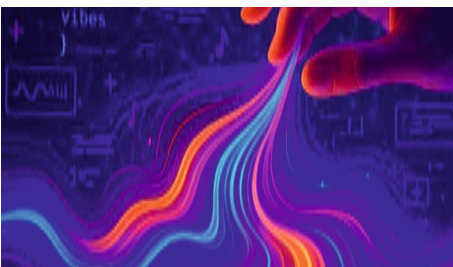
Navigating the Future with Vibe Engineering



Vibe Engineering marks a new era in software development where Artificial Intelligence (AI) and emotional intelligence work hand in hand. Unlike traditional coding, it focuses on creating software that not only functions efficiently but also connects emotionally with users.

By integrating AI throughout the development process—from design to deployment—Vibe Engineering enhances collaboration, speeds up coding, and ensures emotionally engaging user experiences. Tools like CodeRabbit assist developers with real-time feedback and debugging, turning AI into a true coding partner.

However, challenges such as ethical AI use, data privacy, and keeping pace with rapid technological changes demand constant vigilance and responsibility from developers.



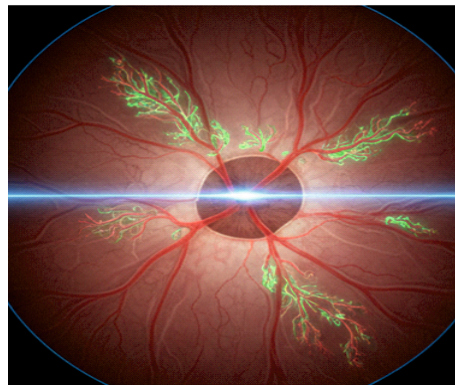
In essence, Vibe Engineering combines AI innovation with human creativity, leading to smarter, more intuitive, and emotionally resonant software solutions.

STUDENT PROJECTS

Neovascularization detection and localization in fundus image using DL

Royyala Sri Kavya (22UP1A05E9)

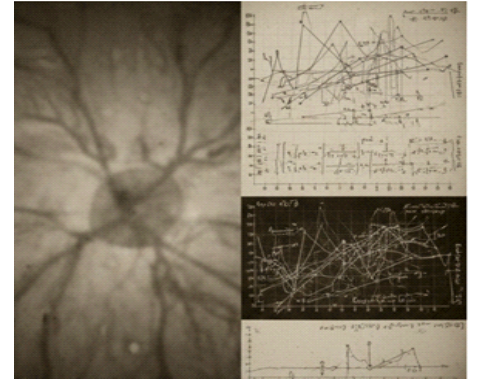
Neovascularization, the pathological formation of new, fragile blood vessels in the retina, is a hallmark sign of proliferative diabetic retinopathy (PDR). If left undetected, these abnormal vessels can leak fluid or cause retinal detachment, leading to irreversible vision loss. Detecting these vessels in color fundus photography is notoriously difficult because they are often thin, tangled, and easily confused with normal retinal anatomy. This project utilizes Deep Learning (DL) to automate the detection and precise localization of neovascularization. By training neural networks to identify these micro-vascular abnormalities, the system provides an objective diagnostic tool that supports ophthalmologists in early intervention and personalized treatment planning.



Existing Systems

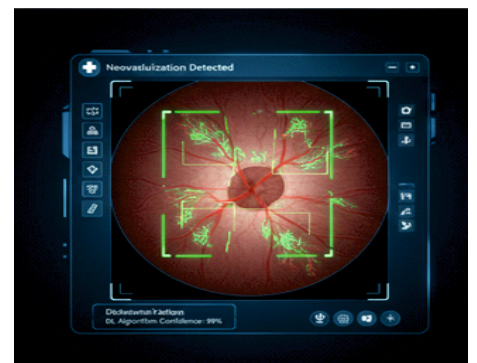
Current clinical workflows for neovascularization detection rely heavily on manual screening by trained graders or the use of invasive procedures like Fluorescein Angiography (FA). Manual grading is subjective, prone to inter-observer variability, and highly time-consuming given the global shortage of retinal specialists. Traditional automated systems typically use hand-crafted feature extraction methods, such as vessel segmentation followed by morphological filters to detect "fronds." However, these systems frequently fail to distinguish between neovascularization and intraretinal microvascular abnormalities (IRMA) or normal vessel bifurcations, resulting in high false-positive rates and limited diagnostic accuracy. Furthermore, their dependence on manually designed features reduces their robustness across diverse retinal image qualities, imaging devices, and patient populations, highlighting the need for

more reliable, scalable, and intelligent deep learning-based approaches for the early and accurate detection of retinal neovascularization.



Proposed System

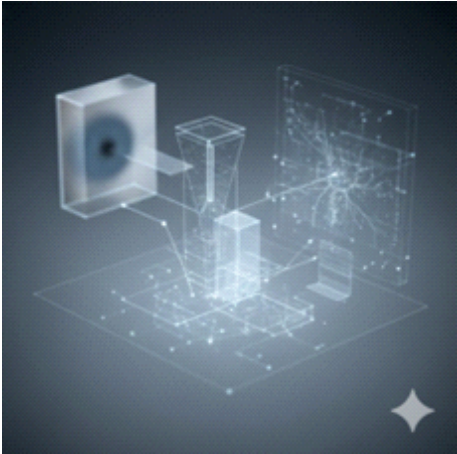
The proposed system implements an end-to-end Deep Learning framework designed for both global classification and local segmentation of neovascularization. Utilizing a "U-Net" or "Mask R-CNN" architecture, the system doesn't just flag an image as diseased but generates a pixel-level heatmap or "mask" indicating the exact location of abnormal vessel growth. The system incorporates an attention mechanism that allows the model to focus on fine, low-contrast vascular structures while ignoring common distractors like exudates or hemorrhages. This dual-task approach ensures that clinicians receive both a high-confidence diagnosis and a visual map for targeted laser photocoagulation or anti-VEGF injection planning.



Methodologies Used

The methodology involves a multi-stage pipeline beginning with image enhancement techniques like CLAHE (Contrast Limited Adaptive Histogram Equalization) to normalize lighting in fundus images. The core model is a Deep Convolutional Neural Network (DCNN), such as a modified ResNet or EfficientNet, pre-trained on the ImageNet dataset via Transfer Learning. For localization, Feature Pyramid Networks (FPN) are used to

capture multi-scale features of the vessels. The training process utilizes a weighted Dice Loss function to handle the heavy class imbalance between diseased and healthy pixels. Finally, Gradient-weighted Class Activation Mapping (Grad-CAM) is applied to provide "explainable AI," visually justifying the model's classification decisions to the medical practitioner.



Secure federated cloud storage protection strategy using hybrid heuristics attribute – based encryption with permissioned block chain

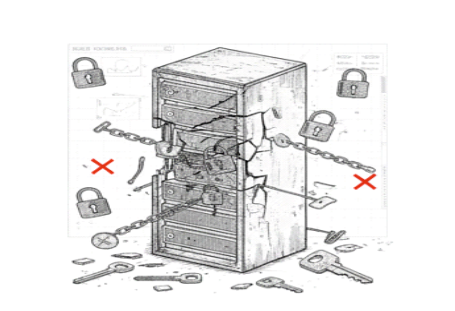
Jiya Batra (22UP1A0575)

The shift toward federated cloud storage has revolutionized data accessibility but introduced significant vulnerabilities regarding unauthorized access and data privacy. In a federated environment, data is distributed across multiple cloud providers, making traditional centralized security measures inadequate. This project introduces a robust protection strategy that integrates Hybrid Heuristics Attribute-Based Encryption (ABE) with a Permissioned Blockchain. The goal is to provide a decentralized, fine-grained access control mechanism where data remains encrypted and accessible only to users who satisfy specific attribute policies. By combining these technologies, the system ensures that sensitive information is protected against both external breaches and untrustworthy cloud service providers.



Existing Systems

Current cloud security models largely rely on Role-Based Access Control (RBAC) and standard symmetric or asymmetric encryption. While effective in localized settings, these systems struggle in federated environments due to the "Key Escrow" problem, where the cloud provider often manages the decryption keys, posing a major privacy risk. Existing Attribute-Based Encryption (ABE) implementations often suffer from high computational overhead and latency during the decryption process. Furthermore, centralized logs for access requests are prone to tampering and single points of failure, making it difficult to maintain an immutable audit trail of who accessed what data and when.



Proposed System

The proposed strategy utilizes a Permissioned Blockchain to act as a decentralized, immutable ledger for attribute management and access auditing. Unlike public blockchains, this permissioned framework restricts network participation to authorized stakeholders, ensuring high performance and privacy. The core innovation lies in the Hybrid Heuristic approach, which optimizes the ABE policy engine to reduce computational costs. When a user requests data, the blockchain verifies their attributes against the smart contract policies. If valid, the system grants a partial decryption key. This dual-layer approach ensures that even if a cloud node is compromised, the attacker

cannot decrypt the data without the blockchain-verified attribute tokens.



Methodologies Used

The methodology involves the implementation of Ciphertext-Policy Attribute-Based Encryption (CP-ABE), where access policies are embedded directly into the encrypted data. To improve efficiency, Heuristic Optimization algorithms (such as Genetic Algorithms or Particle Swarm Optimization) are used to streamline the attribute matching process. The Hyperledger Fabric framework is typically employed for the permissioned blockchain, utilizing Smart Contracts (Chaincode) to automate the verification of user attributes. Additionally, a Hybrid Encryption scheme is used—where a fast symmetric key (AES) encrypts the bulk data, and the ABE system encrypts only the AES key—to ensure the system remains scalable for large-scale federated storage.



CAMPUS RECRUITMENT

Sl No	Company Name	Package	Designation	No. of CSE Students placed
1	Infosys	3.6 LPA	System engineer	2
2	Cognizant	4 LPA	Generation cognizant	2
3	Acurent IT	5 LPA	Software developer	3
4	Kodebloom technologies	3 LPA	Full stack developer	4

Placed Students Poster

SUCCESS STORIES...
Batch: 2024-25

Congratulations!

12 STUDENTS HAS BEEN SELECTED FOR

WITH PACKAGE: **3 LAKHS PER ANNUM**

VIGNAN'S
INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN
EMPOWERING WOMEN

KodeBloom
Building and Scaling Talent

STIP14001 Rashmi Prasad CSE	STIP14003 Anusha CSE	STIP14005 Anusha CSE	STIP14007 Rashmi Prasad CSE
STIP14009 Anusha CSE	STIP14011 Anusha CSE	STIP14013 Anusha CSE	STIP14015 Anusha CSE
STIP14017 Anusha CSE	STIP14019 Anusha CSE	STIP14021 Anusha CSE	STIP14023 Anusha CSE
STIP14025 Anusha CSE	STIP14027 Anusha CSE	STIP14029 Anusha CSE	STIP14031 Anusha CSE

SUCCESS STORIES...
Batch: 2024-25

Congratulations!

7 STUDENTS HAS BEEN SELECTED FOR

WITH PACKAGE: **4 LAKHS PER ANNUM**

VIGNAN'S
INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN
EMPOWERING WOMEN

cognizant

Chila Harshitha 21UPIA0518 - CSE	Sri Varshini Yadav Boda 21UPIA0507 - CSE	Chintha Pavani 21UPIA0520 - CSE	Chila Harshitha 21UPIA0515 - CSE
SADHU SWATHIPRIYA 21UPIA7220 - AIDS	M Ruchitha 21UPIA6748 - DS	V Mounika 22UPSA6709 - DS	

SUCCESS STORIES...
Batch: 2024-25

Congratulations!

3 STUDENTS HAS BEEN SELECTED FOR

WITH PACKAGE: **5 LAKHS PER ANNUM**

VIGNAN'S
INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN
EMPOWERING WOMEN

CRUENT IT

Wakhradkar Ruthuja 21UPIA0500 - CSE	Sana 21UPIA0557 - CSE	N Akshitha 21UPIA05G5 - CSE
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SUCCESS STORIES
2024-2025

Batch: 2024-25

Congratulations!

Infosys

WITH PACKAGE: **3.6 LAKHS PER ANNUM**

VIGNAN'S
INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN
EMPOWERING WOMEN

ANUSHA 21UPIA0518 - CSE	ANUSHA 21UPIA0515 - CSE
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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.