



## 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. B. Mamatha**, Assistant Professor, CSE.

**Ms. G S Yamini Devi** CSE (Student)

**Ms. Ojasvi Pattanaik** CSE(Student)

**Ms. K S Preethi**, CSE(Student)

**Ms. Rachel Vinitha**, 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.



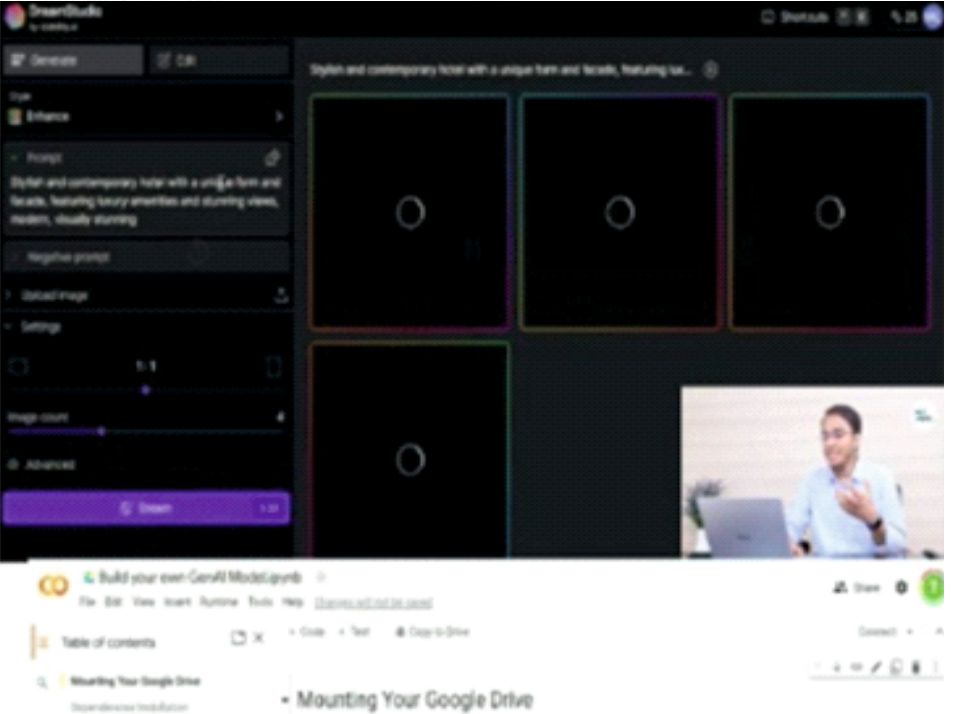
# HOD'S MESSAGE

**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:

The Department of Computer Science and Engineering at Vignan's Institute of Management and Technology for Women (VMTW) organized an Online Workshop for II-year students in association with NxtWave. The session aimed to enhance students' industry readiness by introducing them to emerging technologies and practical skills in coding and software development. The workshop provided valuable insights into real-world applications, helping students strengthen their technical foundation and prepare for future career opportunities.



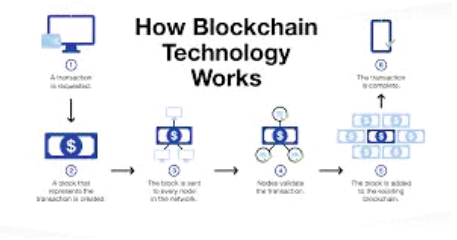
## FACULTY ARTICLE ON BLOCKCHAIN TECHNOLOGY – REDEFINING DIGITAL TRUST

By, Mrs Amulya Rachna, Assistant  
Professor(CSE)

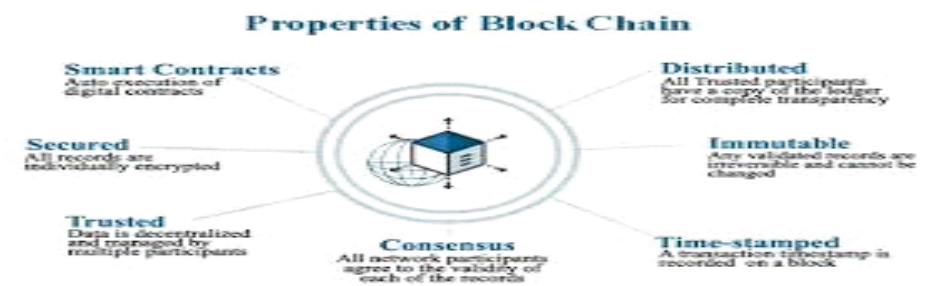
### Blockchain Technology – Redefining Digital Trust



Blockchain technology has emerged as one of the most revolutionary innovations of the digital era, offering a new level of security, transparency, and decentralization in data management. Originally developed as the foundation for cryptocurrencies like Bitcoin, blockchain has now expanded its applications across multiple domains including finance, healthcare, supply chain, and governance.



At its core, blockchain is a distributed ledger system where data is stored in a series of blocks linked together in a chain. Each block contains a set of transactions that are cryptographically secured, making the data tamper-proof and verifiable. This decentralized structure eliminates the need for intermediaries, reducing costs and increasing trust among users.



Beyond cryptocurrencies, blockchain enables smart contracts, digital identity management, and secure record-keeping. In industries like healthcare, it ensures the privacy and accuracy of medical records, while in logistics, it enhances traceability and efficiency.

As organizations continue to embrace Web 3.0 and decentralized applications (DApps), blockchain stands at the forefront of technological transformation — ushering in a future built on digital trust, security, and transparency.



## FACULTY PUBLICATIONS

| SI No | Author               | Title                                                                                                                                | ISSN No   | Journal name                    |
|-------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------|
| 1     | Amulya Rachana       | Effectiveness of iot in an assortment of applications with essentiality of big data analytics using machine learning                 | 0970-2555 | Industrial Engineering Journal  |
| 2     | S.Chandra Shaker     | Road transport solutions: license plate number extraction and helmet detection using yolo v3 and convolutional neural networks (cnn) | 0377-9254 | Journal of Engineering Sciences |
| 3     | M.Parimala           | Malevolent and phishing unified resource location detection based on machine learning deep learning techniques                       | 0377-9254 | Journal of Engineering Sciences |
| 4     | Ramesh Sahoo         | Soil taxonomy and preeminent crop extrapolation using generative adversarial networks (gans)                                         | 0377-9254 | Journal of Engineering Sciences |
| 5     | S. Santosh Kumar,    | Aimt- investigation of the access identity management technologies for safe and resonance cloud computing                            | 0970-2555 | Industrial Engineering Journal  |
| 6     | Dr.P.Rajendra Prasad | Artificial intelligence based rainfall prophecy using performance evaluation of deep neural networks                                 | 0970-2555 | Industrial Engineering Journal  |
| 7     | G.Ramya              | Market research: taxonomy and pulling out of sales prediction using artificial intelligence and machine learning                     | 0970-2555 | Industrial Engineering Journal  |
| 8     | Amulya Rachna        | Botnet show belligerence detection in internet of things using advanced machine learning algorithms                                  | 2347-3150 | Mukt Shabd journal              |
| 9     | Mrs Bhanusri         | On traffic -aware partition and aggregationin map reduce for big data applications                                                   | Vol 9     | Mantech publications            |

| FDP ATTENDED |                     |                                                  |                         |                   |
|--------------|---------------------|--------------------------------------------------|-------------------------|-------------------|
| SI No        | Name of the faculty | Event Type                                       | Date of event           | Mode of attending |
| 1            | Mrs B Mamatha       | FDP-Data Visualizati on Using Tableau            | 1st to 5th April, 2024  | Online            |
| 2            | Mrs B Mamatha       | FDP-Deep learning and smart driven applicati ons | 24th to 29th JUNE -2024 | Online            |
| 3            | Mrs. Bhanusri       | FDP-Data Visualizati on Using Tableau            | 1st to 5th April, 2024  | Online            |

**STUDENT ARTICLE ON SHAPING THE FUTURE WITH DATA**

By, Rachel Vinitha III year (CSE)

**Predictive Analysis – Shaping the Future with Data**



In the age of big data, predictive analysis has emerged as a powerful tool that helps organizations make informed decisions by anticipating future outcomes. It involves the use of statistical algorithms, machine learning models, and historical data to predict trends, behaviors, and events. From forecasting weather conditions to predicting stock market trends and customer preferences, predictive analysis is transforming industries across the globe. In healthcare, it aids in early disease detection; in education, it helps identify students at risk; and in business, it enhances marketing strategies and risk management.



# Evolution of Predictive Analytics

**1980s**  
What happened?  
Reporting  
Sales and Marketing  
Internal Data

**1990s**  
What did it happen?  
Analytics  
Excel, OLAP

**2000s**  
What is happening?  
Reporting  
Data Mining, Data Warehouse

**2010s**  
What will happen?  
Predictions  
Business, Data  
Marketing, Optimization

- Predictive Analytics
- Analytics
- Reporting

**ThingQbator idea challenge 2024:** The thingQbator Idea Challenge 2024, organized by the NASSCOM Foundation, encouraged young innovators to bring forward groundbreaking ideas with the potential to transform society. Students were invited to submit their creative concepts and stand a chance to win seed funding of ₹5 lakhs for their startups along with other exciting rewards. The initiative aimed to foster innovation, entrepreneurship, and problem-solving skills among youth, inspiring them to turn ideas into impactful solutions for a better tomorrow.



# thingQbator

## IDEA CHALLENGE '24

Have an idea which has the potential to change society?  
 Submit your ideas and get a chance to win seed funding of 5 Lakh for your startup and other exciting prizes!

 **Last Date To Submit**  
**5TH JUNE 2024**

 **Submit Your Application**

[thingqbator.nasscomfoundation.org](https://thingqbator.nasscomfoundation.org)

  [@thingqbator](https://www.facebook.com/thingqbator)



| SI No | Company Name         | Package    | Designation                                    | No. of CSE Students placed |
|-------|----------------------|------------|------------------------------------------------|----------------------------|
| 1     | Inmovidu             | 3 LPA      | Data Analyst                                   | 111                        |
| 2     | Excel R              | 4 LPA-6LPA | Full stack developer, selenium                 | 13                         |
| 3     | Coapps               | 4-5 LPA    | Full stack python engineer, Jr. Data scientist | 7                          |
| 4     | Numetry technologies | 3 LPA      | Software developer                             | 5                          |



# VIGNAN'S

## INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

(Sponsored by Lanka Educational Society)  
Korandapur (V), Ghatkesar (M), Madhavai Madhavagiri (Dist. - 501501)

# Congratulations!

  
**SUSHITA SREE**  
STUDENT - CSE

  
**ADARSHI VENKATESH REDDY**  
STUDENT - CSE

  
**ARCHANA DHANALAKSHMI**  
STUDENT - CSE

  
**POTLURANI SOWMIYA**  
STUDENT - CSE

  
**BHARGAVI MAHALINGAM**  
STUDENT - CSE

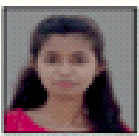
  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**ELANA ADARSHI**  
STUDENT - CSE

  
**SHREYA SOWMIYA**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

SECURED POSTING AT  WITH PACKAGE: **5.5** LAKHS PER ANNUM

[www.vmtwedu.in](http://www.vmtwedu.in)



# VIGNAN'S

## INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

(Sponsored by Lanka Educational Society)  
Korandapur (V), Ghatkesar (M), Madhavai Madhavagiri (Dist. - 501501)

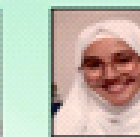
# Congratulations!

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

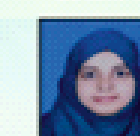
  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

SECURED POSTING AT  WITH PACKAGE: **4.5** LAKHS PER ANNUM

[www.vmtwedu.in](http://www.vmtwedu.in)



# VIGNAN'S

## INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

(Sponsored by Lanka Educational Society)  
Korandapur (V), Ghatkesar (M), Madhavai Madhavagiri (Dist. - 501501)

# Congratulations!

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

  
**LAKSHMI SANKAR**  
STUDENT - CSE

SECURED POSTING AT  WITH PACKAGE: **3** LAKHS PER ANNUM

[www.vmtwedu.in](http://www.vmtwedu.in)

### STUDENT PROJECTS

## STUDENT PERFORMANCE PREDICTION USING MACHINE LEARNING

D Sai Sakshitha (21UP1A0579)

### Introduction

Student performance prediction using Machine Learning (ML) focuses on analyzing student-related data to forecast academic outcomes such as grades, pass/fail status, or risk of dropout. Educational institutions generate large volumes of data including attendance, internal marks, assignments, behavior, and demographic details. Traditional evaluation methods rely mainly on exams, which may not fully reflect a student's learning progress. Machine Learning enables early identification of struggling students by discovering hidden patterns in data. This helps educators provide timely interventions, personalized learning paths, and academic support, ultimately improving overall educational quality and student success rates.



### Existing System

In existing systems, student performance is mainly evaluated using traditional methods such as examinations, quizzes, and manual assessment by teachers. Data is often stored in isolated formats like paper records or basic digital spreadsheets, making analysis time-consuming and error-prone. Performance prediction is mostly reactive, meaning action is taken only after poor results are observed. These systems lack automation, real-time analysis, and predictive capabilities. They do not consider multiple influencing factors such as attendance trends, assignment completion, or learning behavior. As a result, early detection of academic risks is limited, reducing opportunities for timely academic intervention.



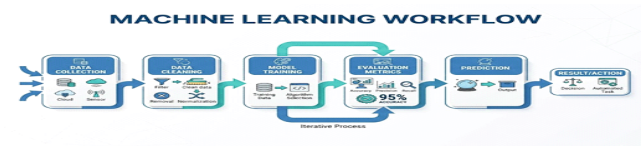
### Proposed System

The proposed system uses Machine Learning algorithms to predict student performance proactively by analyzing historical and real-time academic data. It integrates data such as attendance, internal assessments, assignments, study hours, and behavioral metrics into a centralized system. ML models process this data to identify patterns and predict outcomes like grade performance or dropout risk. The system provides visual dashboards and alerts for educators, enabling early intervention and personalized support. This approach enhances decision-making, improves learning outcomes, and reduces failure rates. The proposed system is scalable, efficient, and adaptable to different educational environments.



### Methodologies Used

The methodology involves data collection, preprocessing, model training, evaluation, and prediction. Initially, student data is collected from academic databases and cleaned to remove inconsistencies and missing values. Feature selection techniques are applied to identify the most influential factors affecting performance. Machine Learning algorithms such as Decision Trees, Random Forest, Support Vector Machines, or Neural Networks are trained using labeled datasets. Model performance is evaluated using metrics like accuracy, precision, and recall. Once validated, the model predicts future student outcomes, enabling institutions to take preventive measures and improve academic planning.



## 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.