



Vision of the Department

To achieve value oriented and quality education with excellent standards on par with evolving technologies and produce technocrats of global standards with capabilities of facing futuristic challenges.

Mission of the Department

- M1: To enrich advanced knowledge among students for reinforcing the domain knowledge and develop capabilities and skills to solve complex engineering problems.
- M2: To impart value based professional education for a challenging career in Computer Science and Engineering.
- M3: To transform the graduates for contributing to the socio-economic development and welfare of the society through value based education

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

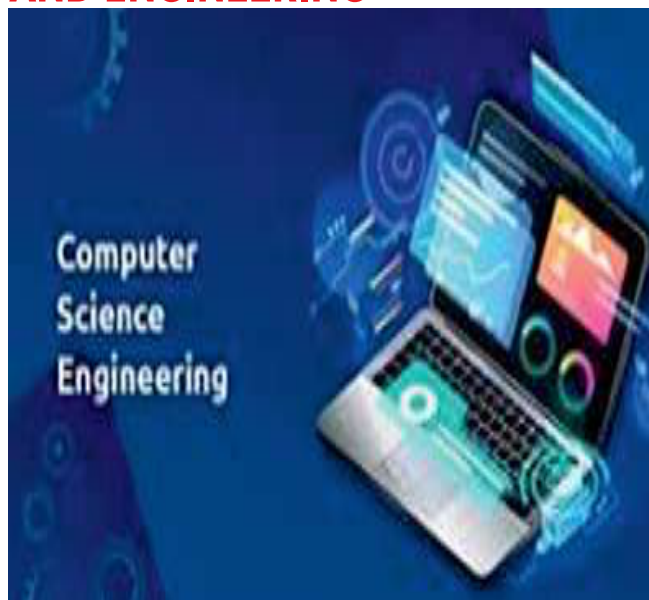
- PSO1: Software Development: Ability to grasp the software development life cycle of software systems and possess competent skill and knowledge of software design process.
- PSO2: Industrial Skills Ability: Ability to interpret fundamental concepts and methodology of computer systems so that students 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

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Nimitha Cirasagandla CSE (student),
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.

FACULTY ARTICLE

By, Mrs. P Chamundeshwari,
Assistant Professor (CSE)

DevOps & future of software development



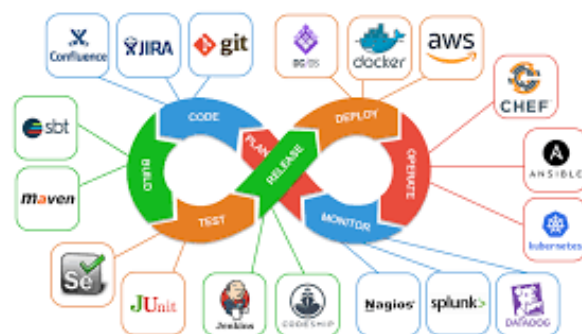
In today's fast-moving digital world, software is no longer developed once and updated occasionally. Instead, it is continuously improved, tested, and deployed. This transformation is largely driven by DevOps — a culture and practice that bridges the gap between development and operations teams. DevOps is not just a set of tools; it is a mindset that promotes collaboration, automation, and continuous improvement.

What is DevOps?

DevOps combines Development (Dev) and Operations (Ops) to create a streamlined software delivery process. Traditionally, developers wrote code and passed it to operations teams for deployment, often causing delays and miscommunication. DevOps removes these silos by encouraging shared responsibility and automation throughout the software lifecycle.

Popular DevOps tools include:

- **Git** – Version control system for tracking code changes
- **Jenkins** – Automation server for CI/CD pipelines
- **Docker** – Containerization platform
- **Kubernetes** – Container orchestration system
- **Ansible** – Configuration management tool



Core Principles of DevOps

1. Continuous Integration (CI)

Developers frequently merge code into a shared repository where automated tests run to detect errors early.

2. Continuous Delivery (CD)

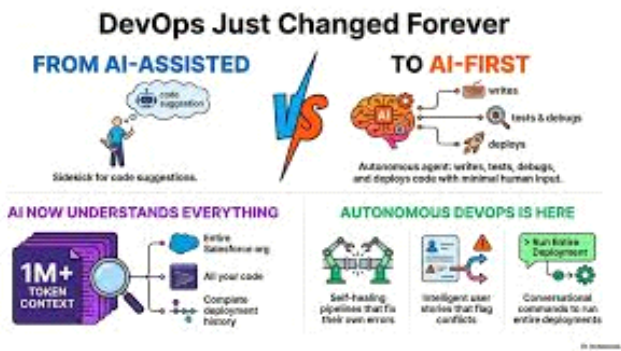
Software updates are automatically prepared for release, enabling faster deployment.

3. Automation

Manual tasks like testing, deployment, and monitoring are automated to reduce errors and increase efficiency.

4. Monitoring & Feedback

Continuous monitoring ensures quick detection of issues and immediate improvements.



Impact of DevOps on Industry

DevOps has transformed industries by:

- Reducing software release cycles from months to days or hours
- Improving product quality through automated testing
- Lowering operational costs
- Enhancing collaboration across teams

Tech giants like Amazon, Google, and Netflix use DevOps practices to deliver seamless user experiences and frequent updates.



The Future of Software Development

- **AI-Driven DevOps (AIOps)**
Artificial Intelligence is being integrated into DevOps to predict failures, optimize performance, and automate decision-making.
- **Cloud-Native Development**
Cloud platforms enable scalable, flexible infrastructure, allowing organizations to innovate rapidly.
- **DevSecOps**
Security is being integrated directly into the DevOps pipeline, ensuring safer software development.
- **Microservices Architecture**
Applications are built as small, independent services, improving scalability and maintainability.

Sl. No	Company Name	Package	Designation	No. of CSE Students placed
1	BYOL	12 LPA	AI Developer	2
2	Sutherland	2.7 LPA	Consultant	13
3	Deloitte India	4.5 LPA	Technology & Transformation	3

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VIGNAN'S

INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN
(AN AUTONOMOUS INSTITUTION)

BATCH: 2025-26

22UP1A05F9
S Pravalika
AI Developers

22UP1A05G3
Gayathri P
AI Developers

With Package:

12

Lakhs Per Annum

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VIGNAN'S

INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN
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2.7

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Success Stories...

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Deloitte

VIGNAN'S

INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN
(AN AUTONOMOUS INSTITUTION)

BATCH: 2025-26

22UP1A0593
Kurva Jeevitha

22UP1A05F1
Sadiment Manaswini

22UP1A05HS
Sakshami Gurram

22UP1A7214
D. Sreeja

With Package:

4.5

Lakhs Per Annum

22UP1A6601
Anushitha Jain

22UP1A6657
Reddy Shreya Divyansha

22UP1A6661
E Radha Sri Divyashitha

Congratulations

Events:

Dussehra & Bathukamma Event:

Dussehra, the festival symbolizing the victory of good over evil, was celebrated with great enthusiasm and cultural spirit at our college. The campus was filled with festive energy as students and faculty gathered to mark the occasion with joy and unity.



The celebration included cultural performances, traditional dances, and music programs that reflected the rich heritage of Indian culture. Students dressed in ethnic attire added color and vibrancy to the event. Special activities and performances highlighted the significance of Dussehra and its message of righteousness, courage, and positivity.



The event encouraged students to understand the cultural values associated with the festival while promoting togetherness and mutual respect. Faculty members appreciated the active participation and creativity displayed by students throughout the celebration.



The Dussehra celebration at our college became a memorable occasion, spreading happiness and reminding everyone of the importance of good values and harmony in life.

Bathukamma, the vibrant floral festival of Telangana, was celebrated with great enthusiasm and cultural spirit at our college campus. The event reflected the rich traditions and heritage of the region while bringing students together in a joyful celebration of nature and unity.



Students dressed in traditional attire added color and elegance to the occasion. Beautiful Bathukamma arrangements were created using a variety of seasonal flowers, showcasing creativity and teamwork. The campus came alive with music, rhythmic clapping, and traditional folk songs as students gathered around the floral arrangements to perform the Bathukamma dance.

The celebration not only highlighted cultural values but also promoted respect for nature and community bonding. Faculty members and students actively participated, making the event lively and memorable.



The Bathukamma celebration at our college strengthened cultural awareness among students and reminded everyone of the importance of preserving traditions while celebrating togetherness and joy.

Christmas event:

Christmas is a season of joy, togetherness, and spreading happiness, and our college campus beautifully reflected the festive spirit this year. The celebration brought students and faculty together, creating an atmosphere filled with warmth, laughter, and cultural harmony.

The campus was decorated with colorful lights, stars, and a beautifully adorned Christmas tree, symbolizing hope and positivity. Students enthusiastically participated in decorating competitions, carol singing, and cultural performances that showcased talent and creativity. The melodious Christmas carols filled the air, creating a cheerful and peaceful ambiance.



One of the highlights of the celebration was the arrival of Santa Claus, who interacted with students and distributed sweets, spreading smiles across the campus. Fun games and interactive activities encouraged participation and strengthened the bond among students from different backgrounds.

The celebration was not just about festivities but also about sharing and caring. Students organized donation drives and shared gifts, reminding everyone of the true essence of Christmas — kindness, generosity, and compassion.

The Christmas celebration at our college became a memorable event, promoting unity, cultural appreciation, and joy among all. It reminded us that festivals are not only traditions but also opportunities to celebrate togetherness and spread happiness.



STUDENT PROJECTS

Effective Demand Forecasting model using business intelligence empowered with machine learning

Sri Naga Sowmya Lakshmi Gayathri Prakki
(22UP1A05G3)

Introduction:

Demand forecasting helps businesses predict future product demand using historical and current data. Accurate forecasting supports better inventory management, production planning, and customer satisfaction. Traditional forecasting methods often fail to handle large and complex datasets.

By combining **Business Intelligence (BI)** with **Machine Learning (ML)**, organizations can analyze business data, identify patterns, and generate accurate demand predictions. The proposed model uses BI for visualization and decision support, while ML algorithms improve prediction accuracy through automated learning.



Existing System

The existing demand forecasting systems mainly depend on traditional statistical methods and manual data analysis techniques. Businesses typically use spreadsheets and historical sales data to estimate future demand. These approaches rely heavily on human judgment and simple models such as moving averages or basic regression analysis. However, such systems are limited in handling large volumes of data and cannot effectively capture complex patterns like

seasonal variations, changing customer behavior, or market fluctuations. Additionally, the absence of real-time analytics and automation results in lower forecasting accuracy, increased operational effort, and inefficient inventory management, often leading to overstocking or stock shortages.

Limitations

- Low prediction accuracy
- No real-time analysis
- Difficulty handling large datasets
- High human effort and time consumption

These issues may lead to inventory imbalance and poor business decisions.



Proposed System

The proposed system introduces an intelligent demand forecasting model that integrates Business Intelligence (BI) with Machine Learning (ML) techniques. The system collects and processes large amounts of business data, applies machine learning algorithms to identify hidden patterns, and generates accurate demand predictions. Business Intelligence tools are used to visualize insights through interactive dashboards and reports, enabling better decision-making. Unlike traditional methods, the proposed system supports automated data processing, real-time analysis, and continuous learning from new data, which improves prediction accuracy over time. This approach helps organizations optimize inventory, reduce operational costs, and respond quickly to changing market conditions through data-driven strategies.

Features

- Automated data analysis
- Machine learning-based prediction
- Real-time dashboards and reports
- Data-driven decision support

Benefits

- Improved forecasting accuracy
- Reduced operational cost
- Faster business decisions
- Better supply chain management



Methodology Used

The system follows these steps:

1. **Data Collection** – Gather historical sales and business data.
2. **Data Preprocessing** – Clean and transform data for analysis.
3. **BI Analysis** – Visualize trends and key performance indicators.
4. **Feature Engineering** – Extract important demand-related features.
5. **Model Training** – Apply ML algorithms such as Regression, Random Forest, or Time Series models.
6. **Prediction** – Generate future demand forecasts.
7. **Visualization** – Display results through BI dashboards.
8. **Continuous Improvement** – Update models with new data for better accuracy.



Proactive Complaint Management in Public Sector Informatics

Chandireddy Harshitha Reddy
(22UP1A0533)

Introduction:

Proactive Complaint Management in Public Sector Informatics refers to the use of information technology, data analytics, and intelligent systems to efficiently handle citizen complaints in government organizations. Traditional complaint systems are mostly reactive, addressing issues only after citizens report them. With the growth of digital governance and smart public services, there is a need for systems that can predict issues, prioritize complaints, and improve response time. By integrating data analytics, machine learning, and centralized information systems, public sector organizations can enhance transparency, accountability, and citizen satisfaction.



Existing System

The existing complaint management systems in the public sector mainly operate in a reactive manner. Citizens submit complaints through manual registers, phone calls, emails, or basic online portals. These systems often lack real-time tracking, intelligent prioritization, and automated routing mechanisms. Complaints may be delayed due to manual processing, lack of coordination between departments, and absence of data-driven decision-making. Additionally, there is limited analysis of historical complaint data, making it difficult to identify recurring issues or prevent future problems.



Proposed System

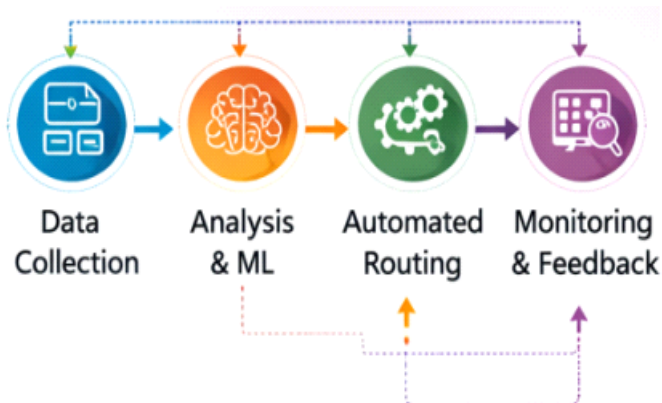
The proposed system introduces a proactive and intelligent complaint management framework using public sector informatics. The system collects complaints from multiple digital platforms such as mobile applications, web portals, and social media channels. Machine learning algorithms analyze complaint patterns to predict potential issues before they escalate. Automated classification and prioritization ensure faster routing to concerned departments. Real-time dashboards enable administrators to monitor complaint status, response performance, and service quality. The system also provides citizens with transparent tracking and timely notifications, improving trust in public services.



Methodology Used

The methodology for the proposed system includes the following stages:

1. **Data Collection:** Gathering complaint data from online portals, mobile apps, and government databases.
2. **Data Preprocessing:** Cleaning and organizing complaint data for analysis.
3. **Complaint Classification:** Applying machine learning and natural language processing (NLP) techniques to categorize complaints automatically.
4. **Priority Prediction:** Using predictive analytics to identify urgent or high-impact complaints.
5. **Automated Routing:** Assigning complaints to relevant departments based on classification results.
6. **Monitoring and Feedback:** Using dashboards and analytics tools to track performance and collect citizen feedback for continuous improvement.



PROGRAM OUTCOMES:

Po1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems

P02: 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.

P03: 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.

P04: 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.

P05: 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.

P06: 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.

P07: 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.

P08: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

Po9: Individual and Team Work: Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.

Po10: 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.

P011: 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.

Po12: 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.