20 Exellence

INSTITUTION'S INNOVATION COUNCIL
(Ministry of HRD Initiative)

NATIONAL CONFERENCE ON RECENT TRENDS IN ENGINEERING AND TECHNOLOGY (NCRTET '25)

CONFERENCE PROCEEDINGS

NCRTET

2025

April 25th 2025

April 26th 2025

ASSOCIATE WITH

VIPS.Tech
Virtual Intelligence and Programming Services

REGARDS,

Dr. Natarajan G
CHAIRMAN

MESSAGE

I am pleased to share that **all departments** have come together to organize the **"National Conference on Recent Trends in Engineering and Technology (NCRTET'25)"** and have successfully published its proceedings. This collaborative effort highlights the dedication, hard work, and enthusiasm of our faculty and students. Such initiatives not only foster academic excellence but also encourage innovation and research across disciplines. I extend my heartfelt gratitude to all Heads of Departments and staff members for their unwavering support. A special note of appreciation to the Editorial Board for their valuable contributions in making this conference a grand success. Congratulations to all!

REGARDS,

Mrs. Brindha Natarajan
CHAIRPERSON

MESSAGE

I am glad to have the opportunity to congratulate the faculty and students of all the departments who have shown remarkable interest and shared their valuable knowledge in creating the **"National Conference on Recent Trends in Engineering and Technology (NCRTET'25)"**. Their enthusiasm, dedication, and boundless energy have played a vital role in the success of this conference. I am confident that their hard work, detailed planning, and sincere execution will yield immensely rewarding outcomes. My best wishes to all committee members and participants of **NCRTET'25**. I deeply appreciate the committed efforts of our faculty and students who made this possible.

REGARDS,

Mr. Viswanathan N
VICE-CHAIRMAN

MESSAGE

It gives me immense pleasure to witness the successful organization of the **"National Conference on Recent Trends in Engineering and Technology (NCRTET'25)"** by **Gojan School of Business and Technology**. Such events reflect our institution's strong commitment to fostering academic excellence and encouraging a research-driven mindset among both students and faculty. At Gojan, we believe true learning happens when knowledge meets application. Our college promotes innovation, practical exposure, and collaborative growth. This conference enables participants to explore emerging trends, share research, and engage with new technologies. I congratulate the organizing team and contributors for their dedication. Wishing you all success at **NCRTET'25.**

Developing App for Detecting Autonomous Car Crash and Moves in Advance

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Abstract

Develop an advanced application leveraging deep learning and computer vision techniques to detect potential car crashes in real-time and initiate preventive measures to avoid collisions. This paper discusses a system that uses IoT, GSM, GPS, and various sensors to detect accidents and send alert messages with the vehicle's location to a control room or rescue team. It also monitors health conditions through sensors. In the year 2019 Junmei sun Published Automatically Capturing and Reproducing Android Application Crashes aims to enhance road safety by providing real-time crash detection and initiating preventive measures, addressing the limitations of previous research by integrating advanced deep learning techniques and emergency response systems. This project discusses an app that uses GPS and accelerometer data from mobile phones to detect accidents and send the location and time of the accident to friends, relatives, and emergency services.

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IoT Based Smart Food Container Monitoring System

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Abstract

The rapid advancement of smart technology and the Internet of Things (IoT) has significantly transformed traditional systems across various domains, including storage and inventory management. Manual methods of monitoring food quality and quantity are often prone to human error, inefficiencies, and delays in detecting spoilage, leading to unnecessary waste and compromised food safety. Addressing these challenges, the IoT-Based Food Container Monitoring System presents an innovative, cost-effective, and scalable solution designed to modernize the way food is stored and monitored in both domestic and industrial settings. This system incorporates a variety of sensors, including temperature and humidity sensors (like the DHT11), gas sensors (such as MQ4 for spoilage detection), infrared sensors for lid status monitoring, ultrasonic sensors for level detection, and actuators like servo motors and fans to automate responses. These components are interfaced with a microcontroller unit (e.g., ESP8266), which collects and processes the sensor data. The processed data is then transmitted via Wi-Fi or GSM modules to a cloud-based platform, such as ThingSpeak, enabling users to access real-time insights through a web or mobile interface. Real-time monitoring allows for timely alerts and automated responses to environmental changes within the food container. For instance, the system can trigger a cooling fan to regulate temperature or alert users if food levels drop below a certain threshold. This proactive approach not only enhances food safety by promptly detecting spoilage conditions but also minimizes waste by encouraging timely consumption or replenishment. Furthermore, the integration of cloud services provides a robust platform for data storage, analysis, and visualization, making it easier for users to track historical trends and optimize inventory management. In industrial environments, this system can be scaled to monitor large storage facilities, contributing to smarter logistics and supply chain efficiency.

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