# BEST PRACTICE-I

**1. Title of the Practice:**

Bodana-Sadhana-Nipuna-Programme **(BSNP)**

**2. Objective:**

Narasaraopeta Engineering College believes in giving students every opportunity to go beyond the regular curriculum, broaden their learning experiences and expand their future options. Within the four-year graduation programme, the institution offers all students an additional learning opportunity to develop their practical laboratory abilities. It encourages students to pursue careers in research and development. They learn to use their knowledge and talents to identify and address societal and industrial problems. They are attempting to incubate the ideas and later turn those into prototypes further moulding them into commercial models that will lead to the development of entrepreneurship.

**3. The context:**

**Innovation and creativity** are essential for navigating the challenges of globalization. The transformation of Science and Engineering has unequivocally shifted the focus of student success from theoretical understanding to **applied, practical knowledge**. These factors encourage technical institutes to broaden their teaching and learning processes to include more practical courses and activities. It is critical to encourage engineering graduates to pursue careers in research and development in order to boost the country's economic development. It is necessary to place a greater emphasis on project-based and situation-based learning, because it allows them to think out of the box and use their imagination to its full potential. Project and model making begins with the

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selection of a topic from a field of interest and continues with the development of creative solutions to numerous project-related problems and other technical hurdles. Project and model making constantly improves the existing system, allowing graduates to think socially while maintaining technical altitude and ideas.

**4. The Practice**:

Our institution provides a robust, high-quality infrastructure designed to facilitate the rapid prototyping and development of contemporary technological models.

We drive global relevance through strategic skill development MOUs with industry giants (INTEL, Viksha Tech, Blackbuck Engineers, etc.) and leading international academic bodies, notably the RWTH Aachen University and its German Pre-Master programs.

Applied Learning:

- Early Project Immersion: Students initiate unique technological fabrication projects (mini-projects) from their second year, guided by expert senior academicians.
- Industry Interface: We host dynamic idea-churning sessions with industry experts and entrepreneurial alumni via our Global Business Incubator.
- Practical Exposure: Students are mandated to secure summer internships/projects at high-profile industries and research institutions.

Faculty actively encourages exploration beyond core curricula, utilizing Virtual Labs and mentoring students to identify and engineer solutions for pressing

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societal issues. This close collaboration extends to co-authoring and publishing research work in reputed international journals and conferences.

Incubation and Funding:

Our dedicated Incubation Center provides necessary facilities and financial runway. We formally support financially viable projects with funding for fabrication and testing, including a budget provision that reimburses more than 50% of the model cost. This commitment, alongside active student chapters (IEEE, ISTE, CSI, etc.), ensures that theoretical knowledge is directly translated into high-impact, commercially viable solutions.

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**5. Evidences**

Driven by an unwavering spirit of innovation and a profound commitment to societal progress, NEC students and faculty form a seamless collaborative powerhouse dedicated to tackling real-world challenges. Our next-generation engineers, fueled by professorial expertise, have successfully pioneered the design, fabrication, and analysis of a novel refrigeration system utilizing LPG as a refrigerant. Their mastery extends into advanced manufacturing, showcased by meticulously crafted 3D-printed prototypes and models, including a multiple-gripper prosthetic hand, a drone, and various complex tools and components. Beyond the lab, our innovators consistently dominate industry-driven arenas like Idea-thons and Hackathons, where their exceptional skills translate into accolades and coveted job placements. Their project portfolio is a testament to boundless potential, spanning transformative solutions such as:

- IoT-based systems for autonomous waste segregation, advanced dam water-level monitoring and management, and RFID-based attendance tracking.
- Cutting-edge applications like IoT-based smart home automation and vehicle-to-vehicle communication.
- Machine learning projects, including bone fracture detection and optimizing flight fare predictions.
- Specialized work in deep learning for agricultural challenges (tomato leaf disease identification, advanced pest identification) and Alzheimer's detection.

Through these intensive, hands-on endeavors from developing a Technical Road for wireless vehicle power to designing sensor-based safety solutions for

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mountain roads. Our students are not just learning, they are engineering the future.

**6. Problems Encountered**

Learning styles and retention differ widely among students, posing a challenge to classroom deliverables within the given limited time. In advanced fields, there is a lack of expertise. Better departmental collaboration is required, which will lead to the development of interdisciplinary models.

**Resources Required**

It is necessary to obtain more modern tools and equipment. More training for both faculty and students by Industry experts is required. Industry interaction has to be improved. Paid Internships are to be enhanced. Industry Live Projects are to be exposed to the students. While revising the curriculum, a full semester may be allotted for project/training at the onsite industry.

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# FABRICATION AND ANALYSIS OF REFRIGERATION SYSTEM USING LPG AS A REFRIGERANT

This project researches the world today is concerned about saving the environment, everywhere measures have been taken up to reduce pollution. Investigates the result of an experimental study carried out to determine the LPG is locally available which comprises of 24.4% propane, 56.4% butane, and 17.2% Isobutane which is varied from company. The LPG is cheaper and possesses an environment friendly nature with no Ozone Depletion Potential (ODP) and no Global Warming Potential (GDP). We have design and analyzed a refrigerator using LPG as refrigerant. As the high- pressure LPG stored in cylinder. Pressurized LPG is passed through the small internal diameter of capillary tube. The result is decreasing the pressure of LPG due to expansion and phase of LPG occurs in an isenthalpic process. The latent heat of evaporation gained by the liquid refrigerant in evaporator and temperature decrease of surrounding

That is the way the LPG can produce refrigerating effect. Performance parameters investigated is the refrigeration effect in certain time. The refrigerator worked efficiently when LPG was used as a refrigerant instead of any other refrigerant

From the experiment which done in atmospheric condition, we can predict the optimum value of cooling effect with the suitable operating condition of regulating valve and capillary tube of the system and the evaporator temperature goes down to the 0.5 °c . In the final result we have found that the COP of a LPG Refrigerator is higher than a domestic refrigerator.

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## DESIGN AND FABRICATION OF 3D PRINTED MULTIPLE GRIPPER PROSTHETIC HAND

The development of prosthetic hands has significantly advanced with the advent of 3D printing technology, offering new possibilities for customization and functionality. This project focuses on the design and fabrication of a multi-gripper prosthetic hand using 3D printing. The prosthetic hand is designed to mimic the natural movements of a human hand, providing multiple grip types to enhance the user's ability to perform daily tasks. By Utilizing Computer-Aided Three-Dimensional Interactive Application (CATIA) software, the hand is meticulously modeled to ensure precision and adaptability. The fabrication process employs high-strength, lightweight polymers, which are 3D printed to create the intricate components of the hand. The design incorporates a cable-driven actuation system and flexure joints, allowing for smooth and controlled movements. The final prosthetic hand is tested for durability, functionality, and user comfort. This project demonstrates the potential of 3D printing in creating cost- effective, highly functional prosthetic devices that can significantly improve the quality of life for individuals with upper limb loss. It is carrying a maximum load of 1.5 kg.

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# DESIGN AND FABRICATION OF 3D PRINTED DRONE

The development of 3D printed drone has significantly advanced with the advent of 3D printing technology, offering new possibilities for customization and functionality. This project focuses on the design and fabrication of a 3D printed drone. By Utilizing Computer-Aided Three Dimensional Interactive Application (CATIA) software that is meticulously modeled to ensure precision and adaptability. The fabrication process employs high-strength, lightweight polymers, which are 3D printed to create the intricate components of the drone parts. The design incorporates a cable-driven actuation system and flexure joints, allowing for smooth and controlled movements. The final 3D printed drone is tested for durability, functionality, and user comfort. This project demonstrates the potential of 3D printing in creating cost-effective, highly functional prosthetic devices that can significantly improve the quality of life for individuals using the industrial wise. The results of this project will provide valuable insights into the potential of 3D printing technology in the design and manufacture of quad copter frames for enhanced flight performances. The project will focus on the development of a lightweight and durable frame structure that can withstand the stress of high- speed flight and maneuverability.

Drone was successfully fabricated use 3D printed with ABS material the test result show that if can fly up to an height of 300-600 meters height. It can fly for 5 to 8 minutes with full charged battery. It can carry a weight of 800grms.

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# DESIGN AND FABRICATION OF RADIO CONTROL PLANE

This project presents the design and fabrication of a radio-controlled (RC) aero plane. The primary objective was to create a lightweight, stable, and manoeuvrable aircraft that can be controlled remotely

The design process involved selecting a suitable air foil shape, determining the wing and tail section geometries, and choosing a suitable material for the aircraft structure. The fabrication process involved cutting and shaping the wing, fuselage, and tail section components, assembling the aircraft, and installing the radio control system, motor, and propeller

The completed aircraft was tested and found to exhibit stable and controlled flight characteristics. This project demonstrates the feasibility of designing and fabricating a functional RC airplane using readily available materials and tools

The average flight time of the RC plane is around one hour, considering various factors, with the most important being the plane's weight, which is approximately 1kg to 1.5kg, helping to achieve better battery life.

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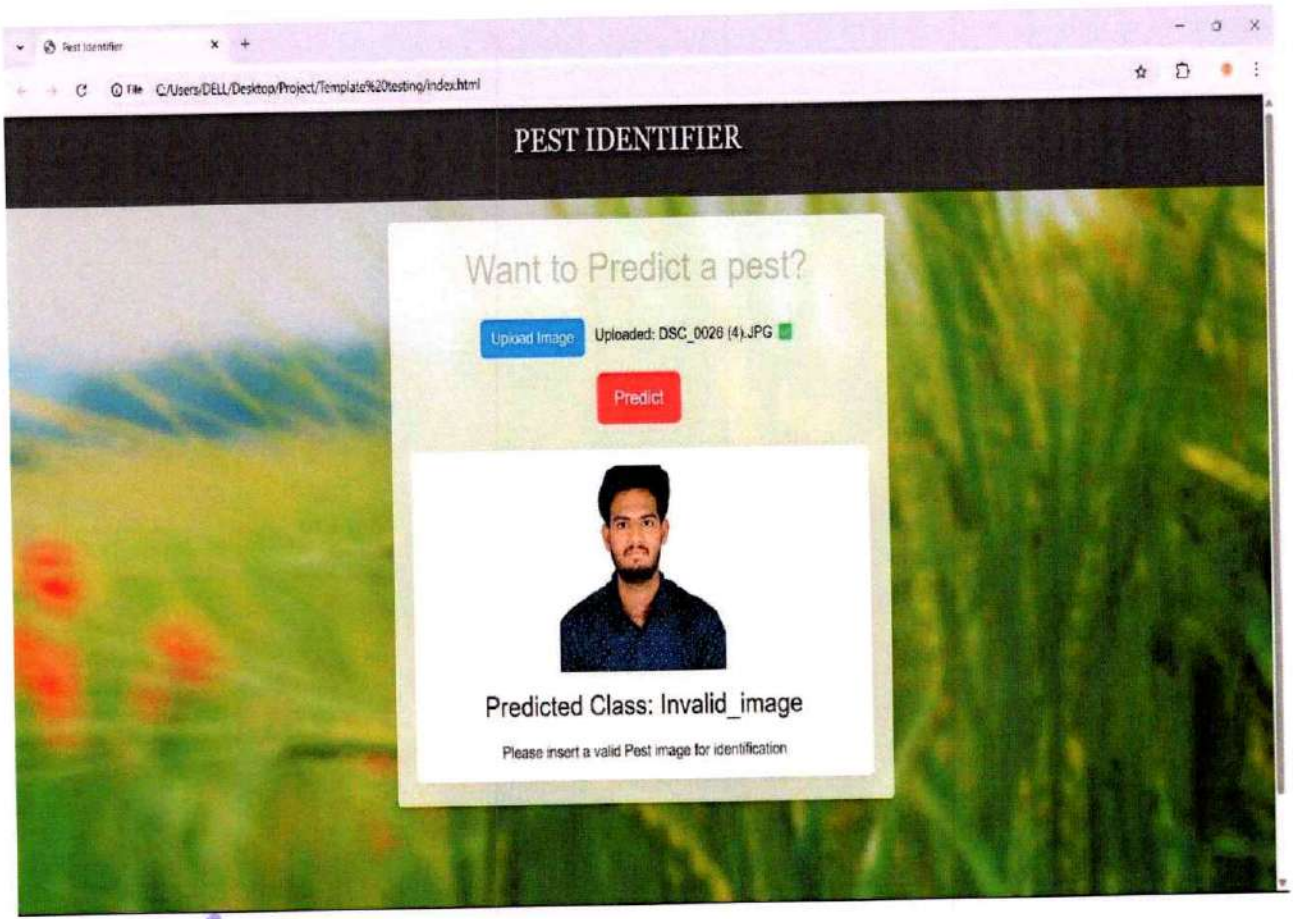
# ADVANCED PEST IDENTIFICATION: AN EFFICIENT DEEP LEARNING APPROACH USING VGG NETWORKS

Accurate pest identification is crucial for both effective pest management and crop protection. Pests must be found early in order to minimise damage and guarantee crop security. Conventional techniques typically entail visual examination and professional involvement, which might be time-consuming and susceptible to errors by humans. On the other hand, deep learning-powered high-performance systems can now more accurately identify pests thanks to developments in computer vision. In this work, we employed the Keras-based deep learning models VGG16 and VGG19 to construct a passive pest detection system. We greatly improved the efficacy of these models in identifying pest species by using strategies such data augmentation, model optimisation, and modification of validated models. The VGG16 model produced an amazing accuracy rate of 99.8% and VGG19 model produced an accuracy of 96.8 % in our testing.

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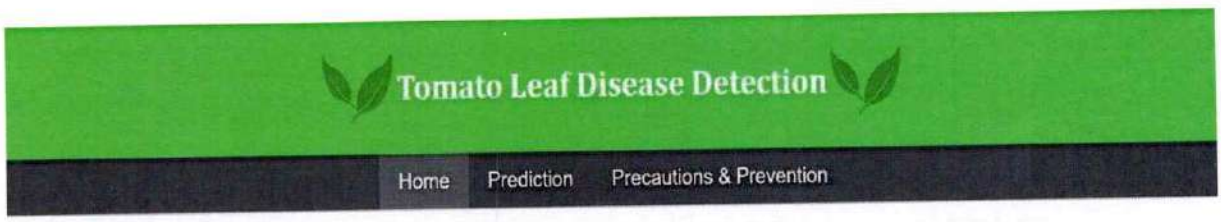
# DEEP LEARNING BASED TOMATO LEAF DISEASE IDENTIFICATION: ENHANCING CLASSIFICATION WITH ALEXNET

Diseases of tomato leaves are significant influence factors that affect the health conditions of crops. Therefore, various diseases have their special characteristics in spots, represented by shapes, colours, and locations. The project proposes a AlexNet architecture-based classification model that can recognise and classify ten different types of diseases using RGB images from a standard normal dataset. The proposed AlexNet model has been designed to focus on several convolutional layers, a max- pooling operation, and fully connected layers that detect and analyze complex features of an image. A number of data augmentation methods have been employed, such as random rotation, shift, shear, and zoom, in order to make the model more robust and reduce some problems of overfitting. Having an accuracy of 97.54% and a low loss of 0.0722 itself depicts the goodness of the model in generalizing on several conditions and classify various diseases of the leaves correctly. This research underlines the potential of the proposed AlexNet-based approach to contribute to precision agriculture with a reliable tool for early and accurate disease detection. Results show significant improvement in disease classification and thus provide useful insights into effective plant disease management.




### Welcome to Tomato Leaf Disease Detection

Tomatoes are one of the most widely cultivated and consumed vegetables worldwide. However, tomato crops are vulnerable to various diseases that can drastically reduce yield and quality.

### Global Tomato Production

Tomatoes are grown worldwide, with the largest producers being:

- CN China – The world's leading tomato producer.
- IN India – A major supplier for domestic and international markets.
- US United States – A key player in fresh and processed tomato production.

### Impact of Diseases on Tomato Yield

Tomato plants are highly susceptible to diseases, leading to significant losses. Some major diseases include:

- Bacterial Spot – Causes black lesions on leaves and fruits.
- Early Blight – Leads to brown patches and premature leaf drop.

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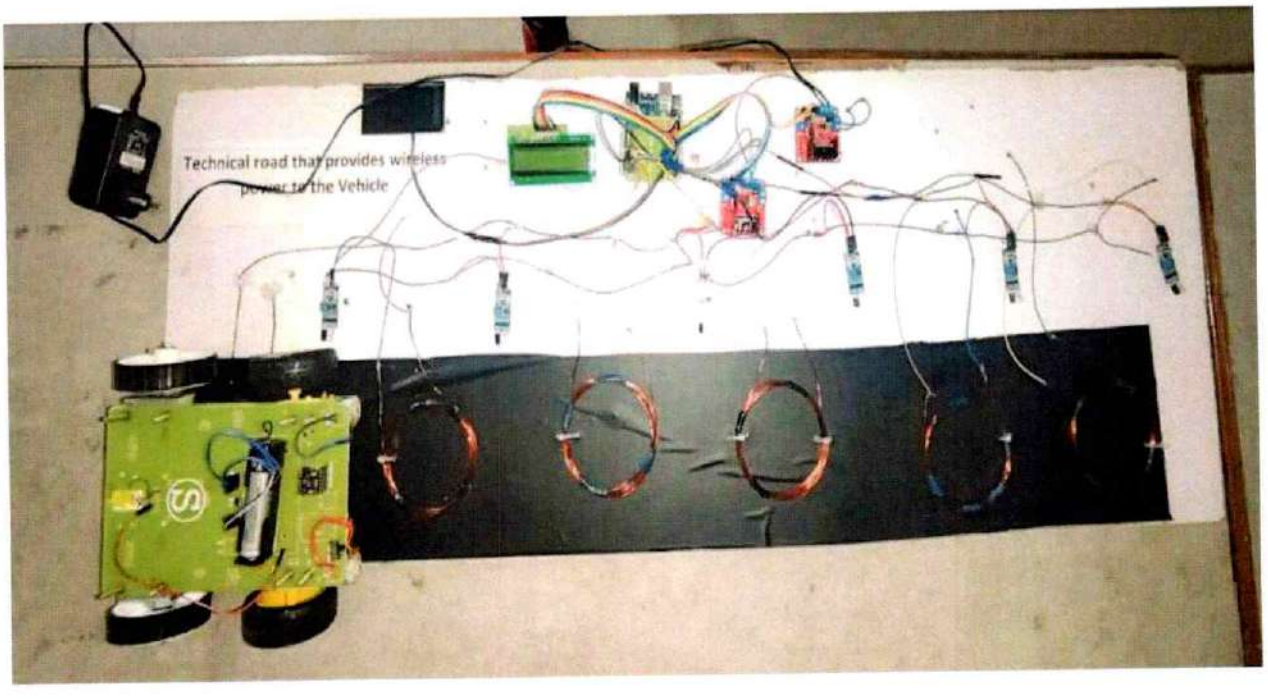
# TECHNICAL ROAD THAT PROVIDES WIRELESS POWER TO THE VEHICLE

This project describes the concept of an electrified road is based on electrically powered vehicles. A moving Field Inductive Power Transfer system for supplying power to electric vehicles while driving along the route using primary coils arranged below the pavement is described. These primary coils transmit the energy via an alternating magnetic field to a secondary coil fixed to the vehicle below its floor. Whenever the vehicles are not running on the electrified lane or pad, the energy produced by the primary coils get wasted. And another problem is that when the vehicle moves out of the electrified lane, vehicle faces power cut problems. So that we will install some other components like sensors and battery. Sensors like proximity sensors to detect that the vehicle is present over the charging pad or not. This will only activate the system when needed, reducing energy waste. And a Battery for safety purpose to use when it is required where the vehicle goes out of the electrified lane.




The Wireless Charging Roads project presents a revolutionary approach to electric vehicle (EV) charging, ensuring uninterrupted mobility and promoting sustainable transportation. By integrating wireless charging technology, IR sensors, Arduino-controlled power management, and renewable energy sources, this system eliminates the need for stationary charging stations and enhances energy efficiency.

The implementation of smart energy management ensures that power is transmitted only when a vehicle is detected, reducing energy wastage. Additionally, real-time battery monitoring through an LCD display and voltage sensors improves user awareness and system reliability.

This project paves the way for the future of EV infrastructure, making electric mobility more convenient, efficient, and eco-friendly. With further advancements, Wireless Charging Roads can

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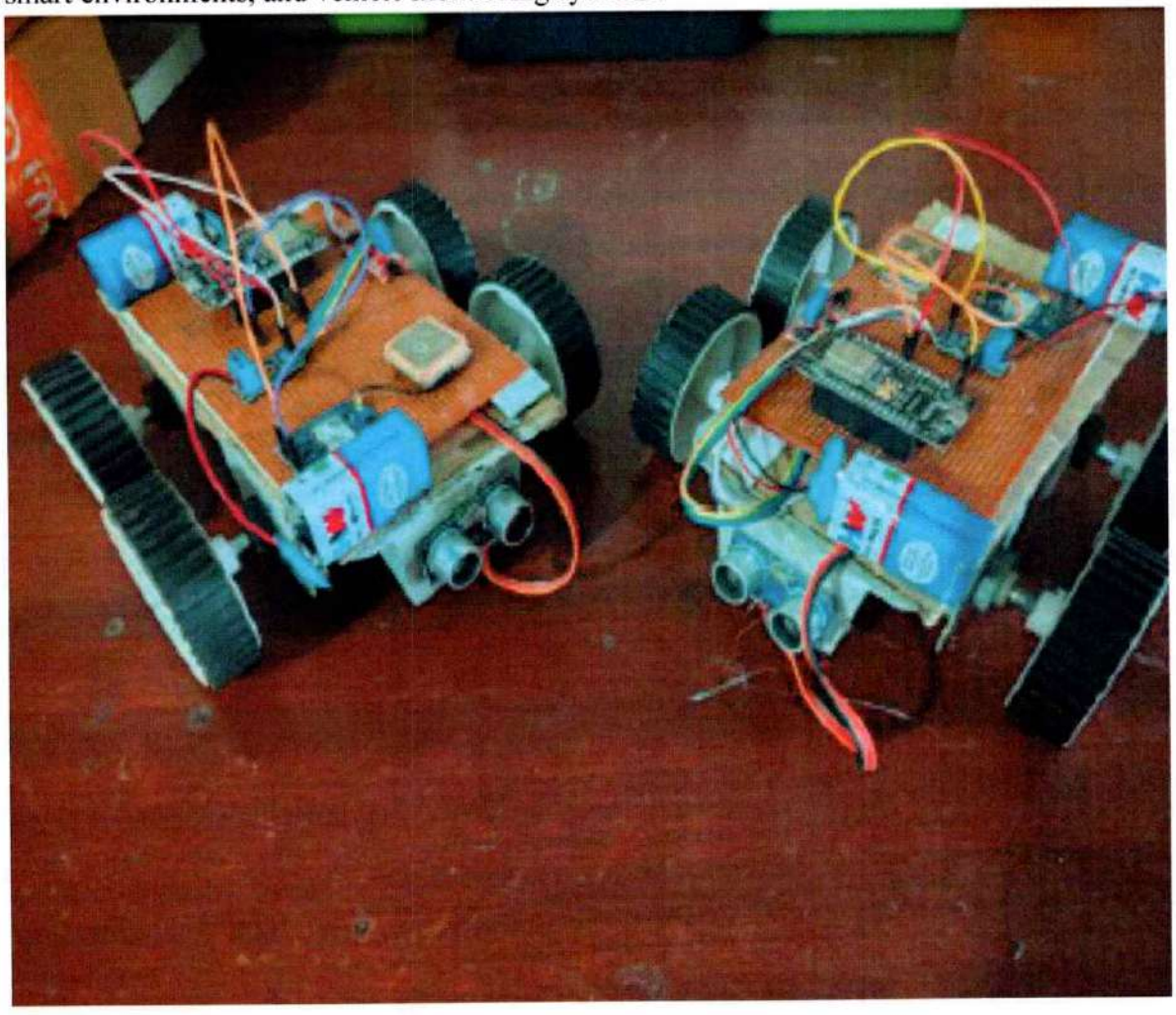
be deployed on highways, urban roads, and smart city projects, accelerating the global transition toward clean and sustainable transportation.

# INTERNET OF THINGS-BASED SMART VEHICLE-TO-VEHICLE COMMUNICATION

- The project presents an innovative Vehicle-to-Vehicle communication system utilizing the Internet of Things and sensor fusion for instantaneous data exchange.
- Key features include multifunctional positioning sensors, data fusion in automobiles, Internet of things-based data exchange, Internet of things edge computing, and the provision of Advanced Driver Assistance Systems technologies.
- Simulation and experimental results demonstrate a 95% reduction in injuries from traffic collisions, a 30% reduction in traffic congestion, and a communication delay of 50 milliseconds or less.
- Applications of this system include Intelligent Transportation Systems, self-driving cars, smart environments, and vehicle monitoring systems.



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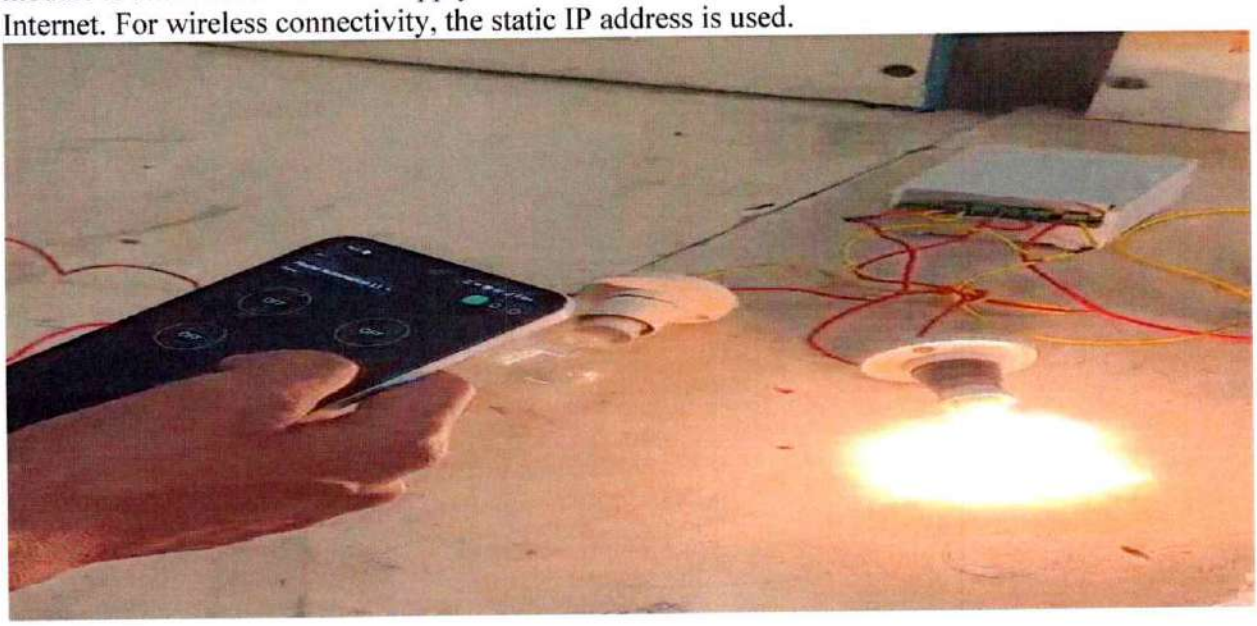
# INTERNET OF THINGS BASED HOME AUTOMATION IN HYBRID MODE

This project is developed for controlling home appliances through internet in real time and also to operate them in different modes from any remote places. Our main focus is to operate the home appliances in our desired modes and control them in an easy way. We have developed an android-based application for controlling appliances and operate them in different modes like optimum, sleeping, auto etc. also all the appliances can be controlled individually.

Different sensors have been used for analysing lights, temperature and motion. Based on sensor values our algorithm will operate all the appliances according to modes. So, by operating them in different modes it will save power as well as make our life easier and comfortable. Advancement in IoT based application has become the state-of-the art technology among the researcher due to the availability of Internet everywhere. To make the application more user friendly, web based and android based technologies have gained their importance in this cutting-edge technology.

In this paper, smart energy efficient home automation system is proposed that can access and control the home equipments from every corner of the world. For this system, Internet connectivity module is attached to the main supply unit of the home system which can be accessed through the Internet. For wireless connectivity, the static IP address is used.



In conclusion, we have presented the step-by-step procedure of smart home automation controller unit. With the help of the design control unit, home appliance can be converted into a smart and intelligent device using IoT. The working of the proposed model was experimentally shown with help of connecting the three bulbs. Proposed system has two advantages. First, using the IoT connectivity, we can monitor and access our smart home easily from anywhere, which will definitely will prove to be energy efficient. Secondly, it acts as a helping hand for the old age and differently abled person. For future work we would like to add up more controlling units that can make our smart home more intelligent that can be practically deployed in the real time situation.

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## AUTONOMOUS WASTE SEGREGATOR USING IOT

For national and municipal governments, providing efficient and long-term waste management is becoming more challenging due to the intense increase in the quantity and variety of concrete and dangerous waste because of ongoing financial activity, population growth, and industrialization. To reduce the risk to patient and public health and safety, as well as environmental risk, waste handling, transport, and disposal must be carefully handled. Waste should be separated to maximize its economic worth. There is currently no system in place for households to separate dry, moist, and metallic wastes. The Automated Waste Segregator (AWS), a low-cost, user- friendly option for a household waste segregation system, is recommended in this paper so that waste can be given away for treatment. The garbage is to be divided into dry, wet, and metallic waste. The AWS is equipped with sensitive sensors that can sort between dry and wet trash, and with parallel connection impedance sensing technology, metal objects can be located. Experiments using the AWS have shown promising results in separating recyclables, liquids and dry waste.

When waste is placed into the cylindrical tube, the sensors analyze its type. If the rain sensor detects wet waste, the servo motor rotates the upper disc, dropping the waste into the wet bin without requiring movement of the lower disc. If the inductive proximity sensor identifies metal waste, the stepper motor rotates clockwise to align the metal bin below the tube, and the upper disc releases the waste. Afterward, the stepper motor moves back to its original position. For dry waste, detected by the IR sensor, the stepper motor rotates twice clockwise to position the dry bin before the waste is dropped. This automated system allows efficient waste segregation at the household level.

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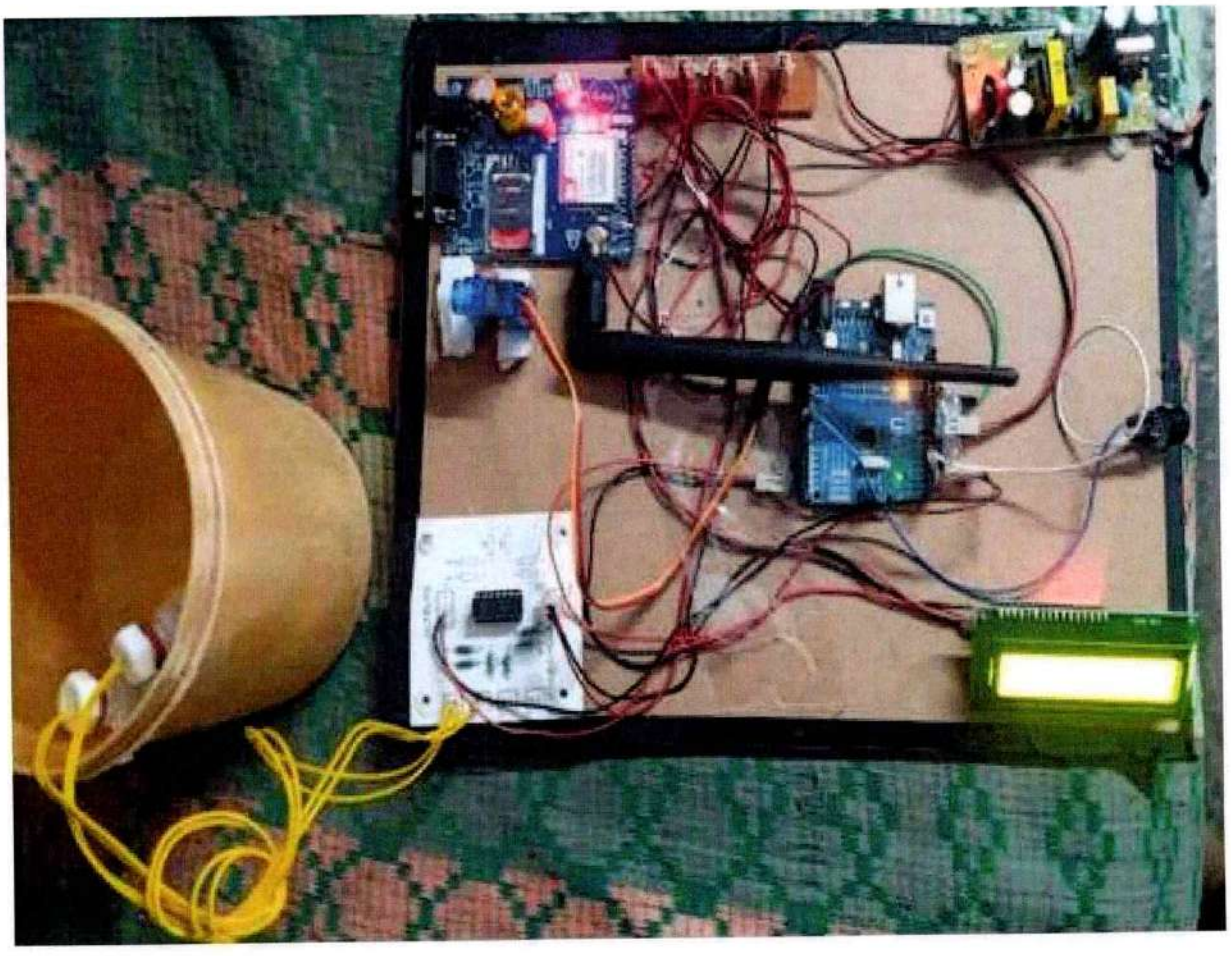
# WATER LEVEL MONITORING AND MANAGEMENT OF DAMS USING IOT



Efficient water management in dams is crucial for preventing floods, ensuring adequate water supply, and optimizing resource utilization. This project presents an IoT-based Dam Gate Monitoring and Controlling System using Arduino, which automates the regulation of dam gates based on real-time water levels. The system incorporates a water level sensor to continuously monitor the reservoir's water levels. When the water reaches a predefined threshold, the Arduino processes the data and actuates a servo motor to open or close the dam gates accordingly.

A GSM module is integrated into the system to send alerts to authorities regarding critical water levels, ensuring timely intervention. An I2C LCD display provides real-time updates, while a buzzer serves as an additional warning mechanism in case of emergencies. This automated solution enhances dam safety, reduces human intervention, and enables remote monitoring and control. The proposed system offers an efficient, low-cost, and scalable approach to modernizing traditional dam operations, ensuring better water resource management and disaster prevention.

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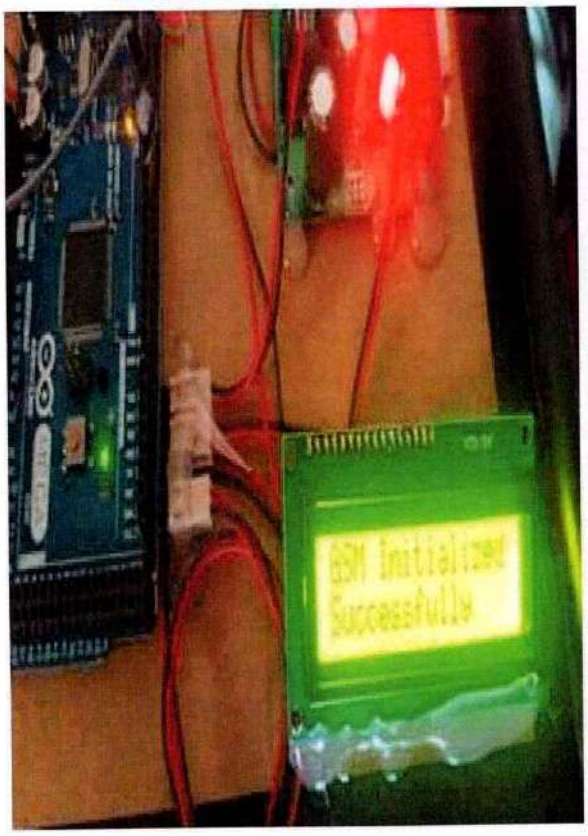
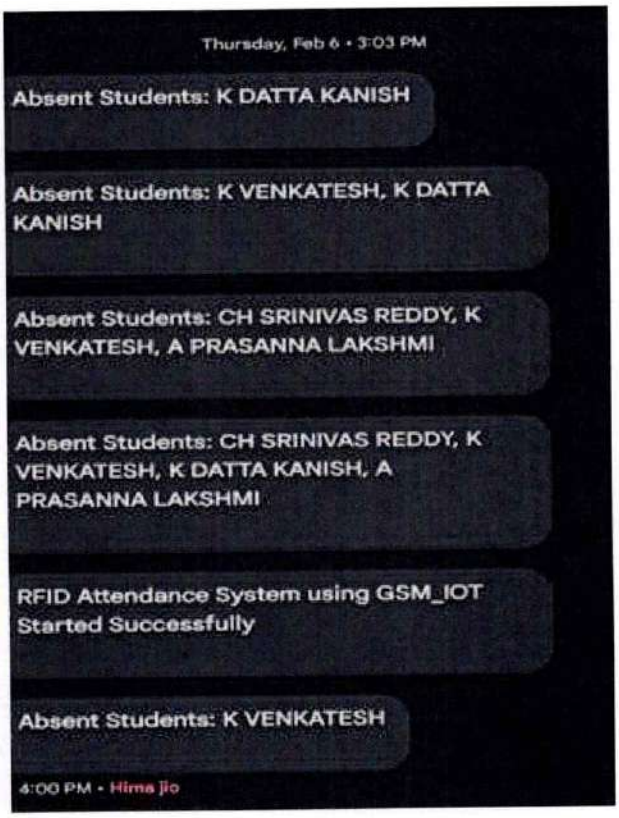
## RF ID BASED COMPUTERIZED ATTENDENCE TRACKING SYSTEM USING GSM AND IOT




The GSM, IoT, and RFID-Based Smart Attendance System is an advanced, automated solution designed to enhance attendance tracking using Arduino, RFID technology, GSM communication, and IoT connectivity. Traditional attendance systems, such as manual registers or biometric devices, often suffer from inefficiencies, errors, and security concerns. This project introduces a contactless, real- time attendance monitoring system that ensures accuracy, security, and remote access to attendance records.

In this system, RFID tags are assigned to individuals, and an RFID reader connected to an Arduino microcontroller detects and verifies attendance. The LCD display provides real-time feedback, while the GSM module sends attendance updates via SMS to administrators. Additionally, the IoT integration enables remote data storage and monitoring, allowing attendance records to be accessed via a cloud-based platform. This system reduces manual effort, minimizes fraudulent entries, and provides an efficient, scalable solution for schools, offices, and industries. By leveraging wireless communication and automation, this project offers a cost-effective, secure, and reliable method for attendance management.

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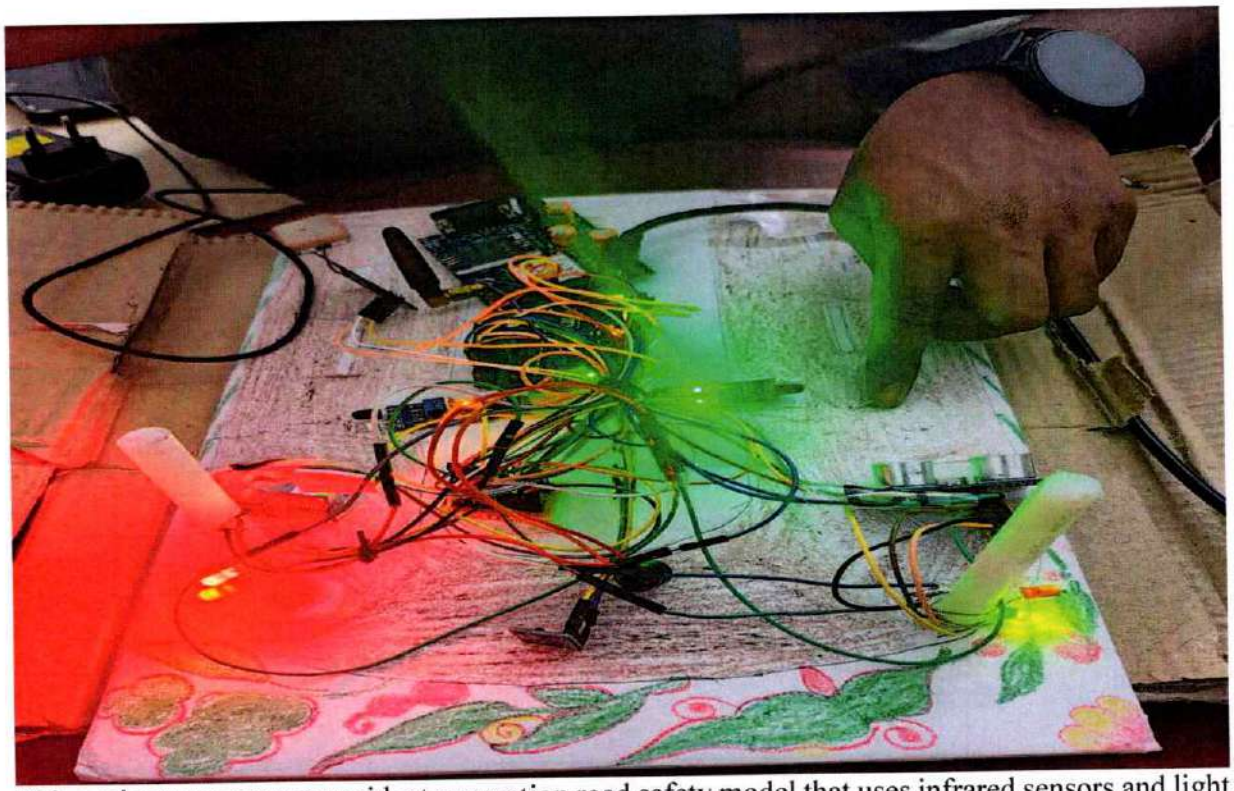
# SENSOR BASED SAFETY SOLUTION ON MOUNTAIN ROADS TO PREVENT ACCIDENTS



This project proposes an accident prevention road safety model that uses infrared sensors and light control to improve road safety on mountain roads. The proposed model aims to detect potential hazards on the road and control traffic lights accordingly to prevent accidents. Infrared sensors are used to detect the presence of vehicles and pedestrians and traffic lights are controlled based on data collected by the sensor.

A warning mechanism is also included to warn the driver of potential dangers on the road. The effectiveness of this model will evaluate by Microcontroller and the results show that the number of accidents will significantly reduced and road safety will improve on mountainous roads. Integrating infrared sensor technology and light control into traffic safety systems can greatly improve the safety of road users, especially in harsh environments such as mountain roads.

This project propose the road safety model for accident prevention with infrared sensor light control is a promising approach to improve road safety on mountain roads. The results of this study will provide valuable information on the use of advanced technologies to improve road safety in harsh environments and contribute to the development of effective accident prevention systems.

Integrating infrared sensor technology and light control into traffic safety systems can greatly improve the safety of road users, especially in harsh environments such as mountain roads. The proposed model can contribute to the development of more effective accident prevention systems and provide valuable information on the use of advanced technologies to improve road safety.

From the above studied it is concluded that:

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1. Accident prevention road safety model with light control using IR sensors in mountain roads is a promising approach for enhancing road safety.
2. The literature review highlights the effectiveness of IR sensors in detecting potential hazards in low-visibility conditions and alerting drivers in real-time.
3. The proposed model utilizes IR sensors to detect the presence of vehicles and pedestrians and controls the traffic lights accordingly to prevent accidents.
4. The model was evaluated through simulations, and the results demonstrate a significant reduction in the number of accidents and an improvement in road safety.

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## ENHANCING ALZHEIMER'S DETECTION WITH CNN'S AND SMOTE-BASED DATA AUGMENTATION

Alzheimer's Disease (AD) is a progressive neurodegenerative disorder and the leading cause of dementia worldwide. It severely impacts cognitive functions, memory, and daily activities, making early and accurate diagnosis crucial for effective management. Traditional diagnostic methods rely on cognitive tests and neuroimaging techniques such as Magnetic Resonance Imaging (MRI) and Positron Emission Tomography (PET), but these methods often require extensive expertise and are prone to subjectivity. With the advent of deep learning, particularly Deep Convolutional Neural Networks (DCNNs), automated and highly accurate AD classification has become increasingly feasible. This major project focuses on the classification of AD stages using DCNN architectures such as VGG19 and EfficientNetB2, leveraging MRI images. To facilitate multi-class classification of AD, we utilized a publicly available dataset consisting of 6,400 MRI images categorized into four stages: Non-Demented, Very Mild Demented, Mild Demented, and Moderate Demented. Proper preprocessing steps such as normalization, augmentation, and the Synthetic Minority Over-sampling Technique (SMOTE) were applied to enhance the dataset quality and address class imbalance. The dataset was split into training, validation, and testing subsets, ensuring fair representation of all classes. The methodology involved training two deep learning architectures: VGG19 and EfficientNetB2. VGG19, a widely used pre-trained convolutional neural network, was fine tuned for the classification task by replacing its fully connected layers. EfficientNetB2, known for its computational efficiency and superior performance, was also employed. Both models were trained using the Adam optimizer and categorical cross-entropy loss, with early stopping and model checkpointing techniques applied to prevent overfitting. Performance evaluation was conducted using key metrics such as accuracy, precision, recall, F1-score, and Area Under the Curve (AUC). The results demonstrated that EfficientNetB2 outperformed VGG19, achieving an impressive accuracy of 99%. The high classification accuracy highlights the potential of deep learning models in improving the reliability of AD diagnosis. The study also included a comparative analysis of other models such as ResNet18 and traditional CNN architectures, confirming that EfficientNetB2 is the most effective model for this task.


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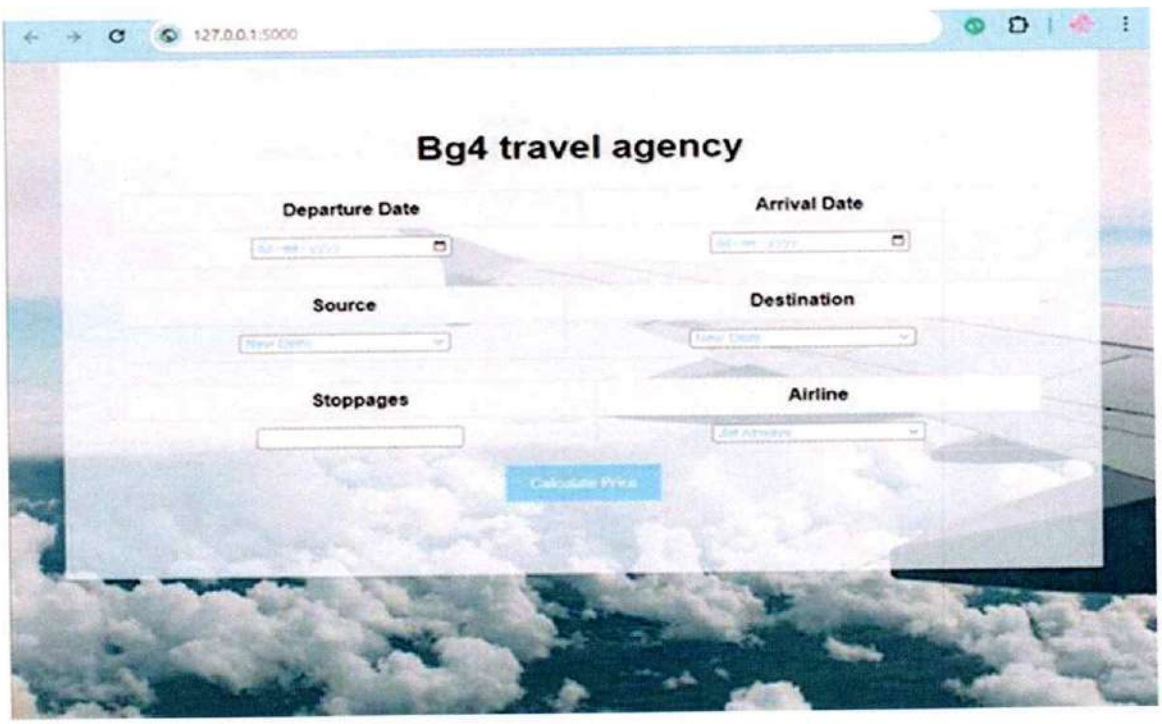
## OPTIMIZING FLIGHT FARE PREDICTIONS USING MACHINE LEARNING ALGORITHMS

The challenge is that it predicts flight fares-a very complicated process because it depends on various dynamic factors interacting with airline pricing. For instance, with increased demand for air travel by a particular airline traveling to a particular route at a particular time, the prices shoot up. Similarly, airlines would like to maximize their revenue management by knowing when a customer is most likely to book tickets. Two different flight fare predictions optimized using machine learning algorithms, namely Random Forest and Decision Tree Regressors, have been chosen for demonstration. The analysis of such models over historical flight data is measured by using the key performance metrics like Mean Absolute Error (MAE) and Root Mean Squared Error (RMSE). Though a very efficient technique of ensemble learning, Random Forest is more reliable and acts better than the traditional model while managing large amounts of datasets and complex variables that normally would cause overfitting. The accuracy of the Random Forest model stands at 87%, hence there is an obvious advantage on the accuracy achieved within the Decision Tree model, that which stands at 84%. It reaches a conclusion that Random Forest algorithm gives much more reliable, accurate, and flexible predictions, which makes it a precious tool for airlines to optimize their pricing strategies as well as for customers to make a sound purchase decision. Thus, the conclusion of this study goes towards how machine learning can contribute in the aviation industry toward revenue management and satisfaction from customers.

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ICAMSD 2025

## INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING FOR SUSTAINABLE DEVELOPMENT

This is to certify that, Dr./Mr./Ms.. **KANDIPATI VENKATA SAROJINI**

of , **NARASARAOPETA ENGINEERING COLLEGE** has presented a paper in the International Conference on Artificial intelligence and Machine Learning for Sustainable Development (ICAMSD 2025) organized at Malla Reddy Engineering College, Hyderabad, Telangana, India held on 21st & 22nd February 2025.

Paper Title : ICAMSD095 Advanced Heart Disease Detection Using Ensemble Learning Enhanced with SMOTE

Dr. B. Sridhar Babu
CONVENER

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Dr. A. Ramaswamy Reddy
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# 7th International Conference on Communication and Computational Technologies

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# CERTIFICATE OF PRESENTATION

This is to certify that

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has presented the paper titled "Revolutionizing Heart Disease Diagnosis: Ensemble and Blending-Based Detection Models" authored by Mani Deep Thota, Sai Dharma Ganesh Chinnam, Venu Gopal Addagada, Mohammed Jani Shaik, Jhansi Vazram Bolla, Deepthi Sowmya Palle in the 7th International Conference on Communication and Computational Technologies (ICCCT 2025) held at National Forensic Sciences University Goa Campus, India during February 14-15, 2025.

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ICCCT 2025 Presentation Certificate

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SRM UNIVERSITY AP
Andhra Pradesh

# CERTIFICATE OF PARTICIPATION

This is to certify that

Mr/Ms **Ontela Hemanth kumar**

*Participated in* ***"Biggest Challenges for Robotics Advancement"*** *Workshop*
*Organized by* ***SRM University AP***
*On* ***07.03.2025*** *at* ***Narasaraopeta Engineering College (A).***

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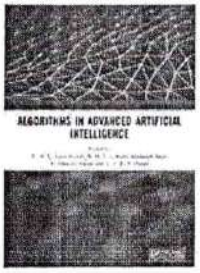
Chapter




# Web-Based Early Stroke Detection: A Machine Learning Approach with Explainable Insights

By Kunda Suresh Babu (/search?contributorName=Kunda Suresh Babu&contributorRole=author&redirectFromPDP=true&context=ubx), Mahesh Babu Parchuri (/search?contributorName=Mahesh Babu Parchuri&contributorRole=author&redirectFromPDP=true&context=ubx), Aswiniduth Muthireddy (/search?contributorName=Aswiniduth Muthireddy&contributorRole=author&redirectFromPDP=true&context=ubx), Lakshmi Vara Prasad Gurram (/search?contributorName=Lakshmi Vara Prasad Gurram&contributorRole=author&redirectFromPDP=true&context=ubx), Naveen Satya Thallam (/search?contributorName=Naveen Satya Thallam&contributorRole=author&redirectFromPDP=true&context=ubx), Shaik Khaja Mohiddin Basha (/search?contributorName=Shaik Khaja Mohiddin Basha&contributorRole=author&redirectFromPDP=true&context=ubx), Sireesha Moturi (/search?contributorName=Sireesha Moturi&contributorRole=author&redirectFromPDP=true&context=ubx)

Book Algorithms in Advanced Artificial Intelligence (https://www.taylorfrancis.com/books/mono/10.1201/9781003641537/algorithms-advanced-artificial-intelligence?refId=70b119f0-b1a5-4c68-a01e-294fe172155e&context=ubx)

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## ABSTRACT

< Previous Chapter (chapters/edit/10.1201/9781003641537-13/secure-private-cloud-storage-sharing-services-jetson-orin-nano-srinivasarao-leelavathy-gedela-triveni-kolamuri-sai-praveen-subrhamanya-karthik-sontyana-jagan?context=ubx)

Next Chapter > (chapters/edit/10.1201/9781003641537-15/optimizing-real-time-intrusion-detection-enhanced-network-security-madhuri-tamilkodi-katari-meghana-gonna-amrutha-sada-surendra-madasi-sri-hari?context=ubx)

# ResNet-CNN Model for Plant Disease Classification for E-Agriculture Applicati

Publisher: IEEE Cite This

Arava Vamsi Kumar ; S. V. N. Sreenivasu ; Kandi Venkata Narasimha Reddy All Authors





**Abstract:**
The advancement of an economy's innovation capacity is closely tied to the progress in agriculture. Effective p disease management is crucial for optimizing crop yields and ensuring agricultural sustainability. This project f on developing a Plant Disease Detection and Classification Network (PDDC-Net) by integrating deep learning The preprocessing stage standardized the dataset images by eliminating various types of interference. The PD employs a Residual Network (ResNet)-Convolution Neural Network (CNN), featuring residual networks, to enh feature extraction and classification accuracy. The PDDC-Net model demonstrated exceptional performance ir detecting and classifying plant leaf diseases. Specifically, it achieved an accuracy rate of 99.84% across vario diseased leaves, including those from potato, tomato, and pepper plants. Further, the suitable pesticide also s for the recognised disease. The proposed PDDC-Net effectively addresses the challenge of plant disease iden with high accuracy, underscoring its potential as a robust tool for agricultural disease management and innova

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**Publisher:** IEEE

**ISBN Information:**

**Conference Location:** Hassan, India

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# Algorithmic Insights into Predicting Hypertension Using Health Data in Cloud-Based Environments

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Keywords: Hypertension Prediction, Cloud-Based Healthcare, Advanced Algorithms, Neural Network, Predictive Analytics

## ABSTRACT

This exploration examines the use of cutting-edge calculations for anticipating hypertension inside cloud-based health conditions. Utilizing assorted health information sources, including electronic health records and wearables, we investigated the prescient abilities of four key calculations: Strategic Relapse, Random Forest, Backing Vector Machine (SVM), and Neural Network (Multi-facet Perceptron). Our exploratory arrangement included thorough information preprocessing, highlight extraction, and model preparation on an extensive dataset. The Neural Network arose as the best calculation, accomplishing an exactness of 90%, accuracy of 92%, review of 88%, F1 score of 90%, and an AUC-ROC of 0.94. Random Forest and SVM likewise exhibited hearty execution with a precision of 88% and 87%, individually. Calculated Relapse, however less difficult, displayed cutthroat dependability with a precision of 85%. Correlations with related work highlighted the adaptability of the calculations, reaching out past unambiguous medical services spaces. This exploration adds to the more extensive talk on prescient medical services examination, stressing the reconciliation of cutting-edge calculations in cloud-based conditions. Our findings set the stage for subsequent research, which may include the continuous observation of IoT devices and the improvement of profound learning designs, all while recognizing specific constraints like the representativeness of the dataset and the model's interpretability.



## DOWNLOADS

# Beyond Deep Features: Fusing Deep Learning with Local Textures for Enhanc Plant Disease Classification

Publisher: IEEE Cite This

Mothe Suneetha ; Tanniru Harshitha ; Yadala Sandhya ; Narra Divya ; S.N.Tirumala Rao ; Dodda Venkatareddy All Authors



Abstract:

Precision plant disease type plays a vital role in powerful crop control, ailment control, and safeguarding agricu productiveness and food security. Deep getting-to-know fashions, mainly deep convolutional neural networks ( have established themselves as surprisingly effective in diagnosing plant illnesses from huge image datasets. However, they now and again struggle with differentiating sicknesses that appear visually similar due to confin nearby texture elements. This technique combines DCNNs for high-level function extraction with neighborhooc descriptors like Local Binary Patterns (LBP) to predict the plant leaf diseases and to improve ailment category accuracy. Even in hard conditions, this framework considerably increases sensitivity and specificity by means combining worldwide and neighborhood information. Experiments on benchmark datasets show that this mode outperforms traditional techniques with an accuracy of 96%. This answer gives a realistic, reliable device for re international agriculture, permitting farmers to make properly knowledgeable choices for preserving crop outpu health

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AG-1

2025 IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI) | 979-8-3315-2169-1/25/$31.00 ©2025 IEEE | DOI: 10.1109/IATMSI64286.2025.10984573

# Unveiling the Potential of Deep Learning: A Multifaceted Approach to Pulmonary Disease Detection and Clinical Integration .

K LakshmiNadh, Gurram Siva Anjali, Pandi Jyoshna Devi, Gude Lavanya, Chalicheema Rajani, Dodda Venkata Reddy
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***Abstract*—Pulmonary diseases are major challenges in health care basically because of the complexities of diagnosing and treating them. However, deep learning technology has shown that enhancing disease detection and integrating these technologies within healthcare environments is possible. This project aims to improve the accuracy of pulmonary disease diagnosis focusing on viral pneumonitis, bacterial pneumonitis, COVID-19, and normal lung conditions through deep learning models. Our models leverage sophisticated, specifically developed CNNs that identify subtle patterns and differences indicative of these diseases from a variety of clinical imaging modalities, including chest radiographs and computed tomography scans. In addition, the project explores ways of incorporating such AI-based ways into present-day clinical practice so that we can shift from traditional methods towards those informed by AI. During this research work among different groups of patients, we have conducted rigorous tests on our models against established diagnostic standards. The findings show significant changes in early detection and significantly reduced diagnostic error rates which emphasize the disruptive ability of deep learning to pulmonary disease management. It also discusses ethical and practical challenges in the use of AI in healthcare, particularly in ensuring patient privacy, making AI-driven decisions transparent, and the need for education and training of healthcare professionals. This work emphasizes the potential that deep learning possesses in revolutionizing the detection of pulmonary diseases and paves the way for its wide application in clinical practice.**

***Keywords*—Deep Learning, Pulmonary Disease Detection, Pneumonia (Viral and Bacterial), COVID-19 Detection, Medical Imaging, Convolutional Neural Networks (CNNs), AI in Healthcare, Clinical Integration, Diagnostic Accuracy**

## I. Introduction

Over the years, integrating deep learning into medical diagnostics has proved to be very helpful in improving disease detection accuracy and efficiency [1]. It is a great challenge for pulmonologic disorders as well as tuberculosis, viral pneumonia, bacterial pneumonia, and COVID-19 because they have complicated clinical presentations with overlapping symptoms [2]. Conventional diagnostic methods utilize mostly specialist interpretation but tend to suffer from subjectivity and scarcity constraints [3]. This study aims at using deep learning in a multi-pronged approach of pulmonary diseases diagnosis with various clinical data packed with radiographs for a more detailed and precise diagnosis [4]. The input variables used are tabled formats like; FVC, FEV1, and PEFR that equal each patient's individual profile assessed [5]; while for radiographic images we rely on convolutional neural networks (CNNs)-based methods that bear a resemblance to the currently working ConvNet4 model; hence relevant traits are extracted [6]. In order to maintain the quality and similarity of the clinical data, different techniques for feature extraction and transformation are used including normalization, standardization, and one-hot encoding, especially for categorical variables e.g. smoking status, and asthma [7]. The resulting data are then merged with a deep learning model with multiple modes which consists of a CNN (Convolutional Neural Network) intended for processing radiography images as well as a dense neural net for clinical information [8]. In turn, these two flows are united in one combined layer, where the model can use both visual and clinical hints during its predictions [9]. Performance analysis metric values alongside Area Under Curve Receiver Operating Characteristic are used to evaluate training sessions on datasets containing both image data and clinical records that come from single patients who have undergone imaging examination [10]. To ensure a successful integration of AI into the medical field, explainability and conscientiousness of the professional must be considered [11]. In our case, this involves applying Grad-CAM for the explanation of predictions, anonymization of patient, and dedicated training resources for the physicians[12]. This study aims to improve diagnosis by combining different types of data, making patient-centric predictions, and providing useful clinical information [13].

## II. Related Literature

Training deep learning algorithms to leverage artificial intelligence (AI) in general healthcare has markedly improved the early screening and diagnosis of lung diseases [8]. The 2023 study, "Automated Detection of SARS-CoV-2 using chest radiographs and computed tomography scans: The Forefront Art," made use of different CNN/RNN hybrids that were used to withdraw spatiotemporal features from clinical imaging [9]. The investigation titled "Exploring Transfer Learning for COVID-19 Detection in Chest X-Rays" (2023) showed that knowledge transfer such as that of ResNet101 or EfficientNet-B0 was efficient when dealing with COVID-19 datasets [10]. A different study "Deep learning-based Multi-class Classification of Pneumonia COVID-19 and Normal CXR" (2022) focused on comparing a number of deep learning approaches of classifying pneumonia DenseNet and MobileNet and the inception

AB-1

# Boosting Network Intrusion Detection With Two-Level Ensemble Learning And Knowledge Distillation Approaches


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*Abstract*— **An advanced IDS framework to complement the inadequacies of the traditional methods dealing with complex and diversified network flows is proposed in this paper. The framework comprehensively solved the two traditional problems of data imbalance and accuracy detection by adopting two- level ensemble learning and knowledge distillation. The proposed system is tested with the NSL-KDD dataset, fusing several ma- chine learning models to improve overall detection performance and leveraging knowledge distillation in transferring knowledge from an advanced complex model to an easy, simple, and computationally efficient one. These results prove significant improvement regarding the detection of both common and rare high-risk attacks; hence, the proposed IDS framework is truly robust and applicable for real-time applications in state-of-the-art network security.**



**Index Terms—Two-Level Ensemble Learning, Stacked knowledge distillation, NSL-KDD Dataset, Stacking Ensemble, Real-Time Intrusion.**


## I. INTRODUCTION

With the increasing frequency and intensity of cyberattacks affecting business and personal data, network security has become much more important in the digital age. Considering these threats, which are becoming increasingly sophisticated and voluminous, traditional IDS solutions fail to provide insight into them. This work presents a new IDS framework based on a two-level ensemble learning approach combined with knowledge distillation. This ensembles the concept of several machine learning models within two-level ensemble learning, in order to enhance the capabilities of detection. Knowledge distillation transfers knowledge from complex, yet heavy models to simpler, more efficient ones. The proposed algorithm is tested on the NSL-KDD dataset and overcomes the challenges of imbalanced and irrelevant data. Thus, the detection of frequent and rare attacks would be more effective.

The proposed framework includes a wide range of base models, tending from support vector machines and decision trees to gradient boosting, whose outputs will be refined by the ensemble methods, including stacking and bagging. This framework then applies knowledge distillation to build a lightweight student model from a much more complex teacher model, achieving a good tradeoff between accuracy and computational efficiency. This boosts not only the performance of detection but also in solving the practical challenges of deployment. It presents a review of the contributions, which include a two-level ensemble learning framework, and an extensive evaluation by several models, and releases the source codes for further research and development in network intrusion detection[9][10].

## II. RELATED WORK

In 2018, a new XAI-based approach transformed network traffic data into image formats for CNN-based intrusion detection, achieving high accuracy on the NSL-KDD dataset. This image-based method demonstrated CNNs' ability to capture complex patterns in traffic data for effective intrusion detection [1]. By 2022, GANs and autoencoders were employed to address data scarcity, with GANs generating synthetic data to enhance training while autoencoders extracted crucial features for refined detection [2][8]. While promising, these methods face challenges in balancing synthetic data realism and computational efficiency.

Stacked Knowledge Distillation (SKD) leverages knowledge from multiple teacher models (e.g., ConvNets, DNNs, RNNs, LSTMs) into a compact ensemble model, improving accuracy and reducing false alarms in IDS. Despite its benefits, SKD demands significant computational resources, and its real- world applicability remains largely untested. Future research should focus on optimizing resource use and conducting field validations [4].

### A. CONTRIBUTION OF THIS WORK

We list our specific contributions in five main points. "Fig. 1" illustrates a sample plot showing the data trend.

AB-2

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# Beyond Parental Height: A Multi-Model Deep Learning Approach for Personalized Adult Height Prediction

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***Abstract*—A new multi-model deep learning approach is proposed for the prediction of adult height from the Galton historical dataset with advanced feature engineering. Traditional approaches to height prediction have relied on linear relationships between the heights of parents and their offspring, which cannot explain the more intricate interplay of genetic, environmental, and lifestyle factors. This study bridges the gap by integrating other influences, s uch a s b irth o rder a nd p hysical a ctivity, in developing a more holistic model for height prediction. Experiments were performed on raw and processed data, mainly on the impact of removing outliers on the accuracy of the model. Results reflect the fact that a multi-modeling system would predict better than the single-model scheme because combining all the factors is thought to make it more flexible and reliable. Data pre-processing was a very important activity, particularly outlier handling since results indicated that the predictive accuracy significantly improved when outliers were removed. This underlines robust data cleaning in machine learning algorithms. In summary, this study furnishes the pediatrician and the parent with a useful tool in delivering more reliable growth forecasts: underlining the role advanced data science techniques can play within personalized healthcare. This advances height prediction but lays grounds for further studies in individually modeling growth.**

***Index Terms*—Child's adult height prediction (AHP), data analysis, machine learning, healthcare.**

## I. Introduction

One of the health metrics is being tall, which is maintained by the interplay of complex genetic and environmental factors. In this light, WHO, CDC, among others, monitor children's growth by tracking data associated with population heights. Cohort studies have enlightened the way growth rates correlate [1]. A major dataset involved in growth curve research and models, such as the Quadratic Exponential Pubertal Halt Model, consists of Galton's height data. Among all the predictors, adult height is one of the critical predictors that determine the performance of athletes in the sport [2]. The major predictors are chronological age, sitting height, and leg length.

Machine learning algorithms have over the last few years gained attention as potent ways of predicting adult height. Some researchers have used Galton's data set to illustrate advancements in predictive efficiency by using such algorithms [3]. Parental height is a relation that would encompass genetic and environmental effects [4]; we used only Galton's data for that. We show the relationship of parent to child height through regression using multimodel deep learning that includes feature engineering as well as outlier removal in the light of further improving prediction of adult heights-a great potential as a resource for pediatricians and parents.

## II. Related Work

Recently, good research interests have been drawn on the predictability of adult height using the technique of machine learning. The major contribution used Galton's height, with a complex application of algorithms with significantly high accuracy [5]. While on a different path, hybrid models introduced the inclusion of factors from different perspectives for overall improved predictive performance [3]. Contrarily, bone age estimation is shown to play a key role in height prediction. It shows its important applicability in all contexts [1].

Research also points out that the anthropometric measures of the body, such as leg length and sitting height, have been found to be the most important predictors to estimate adult

# BEST PRACTICE - II

**1. Title of the Practice:**

**E- Learning** (Encouraging students and faculty for self- learning)

**2. Objectives of the Practice:**

NEC believes in giving its students every opportunity to advance beyond the traditional curriculum, enhancing their learning experiences and expanding their career options. The graduate will have certain skills and competencies upon completion. The objective behind this practice is to provide an additional learning opportunity to all the students within the four-year graduation programme. Students also get remote access to Virtual Labs initiative as a specific tool for acquiring concepts in a variety of science and engineering areas. Through remote experimentation, they will be able to acquire fundamental and sophisticated concepts. As a result, the institution strives to live up to its ultimate aim of "Promoting Self-Learning."

**3. The Context:**

The rapid pace of technological change and the persistent skill gap observed in regional industries necessitate a strategic approach that moves beyond the traditional, fixed curriculum. We recognize that to ensure our graduates are highly competent and immediately employable, the Institute must provide training pathways that are both flexible and certifiable.

This practice addresses the critical need to supplement the curriculum by providing comprehensive, self-paced, and specialized learning opportunities.

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We understand the value of a student's time; therefore, our supplementary programs are meticulously structured for maximum efficiency and accessibility:

- Accelerated Learning: Many programs are designed to be fast-paced, allowing students to acquire critical skills rapidly and maximize their time investment.
- Personalized Pace (Online Advantage): Leveraging the power of digital platforms, numerous courses are available online. This essential flexibility allows students to master the curriculum at their own pace, ensuring deep understanding without compromising their academic schedule.

In essence, by implementing this E-Learning practice, we are transforming career aspirations into tangible outcomes. We provide targeted, flexible, and officially certified training that prepares every student to excel in the competitive global market and ensures they remain competitive and future-ready.

**4. The Practice:**

Students are actively encouraged and motivated to pursue external online certification courses from renowned platforms, including Nul Class, Academy, Apna College, LinkedIn Learning, and MVG Innovations.

Crucially, the Institute leverages its numerous Memoranda of Understanding (MoUs) to provide students with foundational training and ample opportunities for independent practice. This preparation then exposes them to National and International level competitions focused on cutting-edge technologies, ensuring they gain experience on a global stage.

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**5. Evidence of Success:**

The Institute's proactive efforts in promoting additional certification courses and internships have delivered impressive results, significantly enhancing student and faculty competency. During the academic year 2024-2025, Through the NPTEL courses, students and faculty successfully secured **over 1,285 certifications**, thereby substantially enhancing their knowledge and skill setsFurthermore, students achieved over 1,400 certifications and substantially improved their technical proficiency by completing various other Massive Open Online Courses (MOOCs) from platforms such as EdX, Infosys, AutoDesk, Nul Class, Academy, Apna College, LinkedIn Learning, MVG Innovations, Elewayte, HackerRank, Alice Soft, Microsoft-AI Challenge, and Infosys Spring Board. The completion of these specialized courses undeniably provides students with a competitive advantage, particularly in the technical rounds of job interviews, as the knowledge and skills acquired can be directly applied to enhance performance in domain-specific areas in the workplace. Ultimately, the Institute's unwavering commitment to providing cutting-edge technology training directly aligns with government initiatives focused on empowering youth with the essential skills necessary to advance their careers and expand their professional horizons.

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**6. Problems Encountered and Resources Required:**

1. Additional certification programmes may intimidate students. The completion of these online courses is required of all students. The additional course work may be tough for students to handle.

2. The academic calendar is usually set in stone. The examination timetable is rescheduled in the event of unforeseen circumstances. The NPTEL programme timetable may conflict with examination schedules in certain instances.

3. Students can pursue additional online courses from the comfort of their own homes. Some students, however, may not have access to the internet or sufficient bandwidth to complete the courses at home.

**Resources Required**

As a motivational gesture, students who received a gold certificate may be paid for their examination fee. Computer labs may be kept open beyond college hours to help students with internet Band problems they are having at home. Because the institute is autonomous, conflicts between end-of-semester exams and the NPTEL final test may be handled by postponing end-of-semester exams for the students' convenience.

IQAC

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

Elite

# NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

Skill India
कौशल भारत - कुशल भारत

This certificate is awarded to

**NANDIPATI PUJITHA**

for successfully completing the course

## Software Testing

TOP TOPPER 5%

with a consolidated score of **69** %

| | | | |
|---|---|---|---|
| Online Assignments | 19.69/25 | Proctored Exam | 49.5/75 |

Total number of candidates certified in this course: **5340**

R. Chandra

**Dr. Chandrashekar Ramanathan**
Chairman
Professor and Dean (Academics), IIIT- Bangalore

**Jul-Oct 2024**

**(12 week course)**

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

**Prof. Andrew Thangaraj**
NPTEL, Coordinator
IIT Madras

IQAC

iiit-b INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY BANGALORE

FREE ONLINE EDUCATION swayam शिक्षित भारत, उन्नत भारत

Roll No: NPTEL24CS91S453400219

To verify the certificate

No. of credits recommended: 3 or 4

Elite

# NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

Skill India
कौशल भारत - कुशल भारत

This certificate is awarded to

**DR RAVI BABU NARAHARI**

for successfully completing the course

## Engineering Mathematics - I

with a consolidated score of **70** %

| Online Assignments | 24.06/25 | Proctored Exam | 46.25/75 |
|---|---|---|---|

Total number of candidates certified in this course: **211**

IQAC

**Jul-Oct 2024**

**(12 week course)**

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

**Prof. Haimanti Banerji**
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION
swayam
शिक्षित भारत, उन्नत भारत

Roll No: NPTEL24MA93S1053400294

To verify the certificate

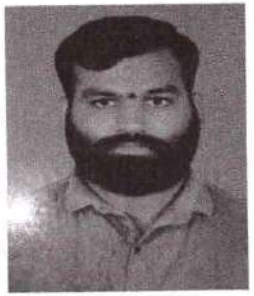
No. of credits recommended: 3 or 4

Elite

# NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

Skill India
कौशल भारत - कुशल भारत



This certificate is awarded to

**JEEVANA MANIKANTA GANJINABOINA**

for successfully completing the course

## Introduction To Internet Of Things

with a consolidated score of **75** %

| | | | |
|---|---|---|---|
| Online Assignments | 23.31/25 | Proctored Exam | 52/75 |

Total number of candidates certified in this course: **38143**

**Jan-Apr 2025**

**(12 week course)**

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

**Prof. Haimanti Banerji**
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION
swayam
शिक्षित भारत, उन्नत भारत

Roll No: NPTEL25CS44S453300165

To verify the certificate

No. of credits recommended: 3 or 4

# Verified
## Certificate

DAVIDSON COLLEGE

Pete Benbow
Business Intelligence Programmer & Analyst
*Davidson College*

This is to certify that

**MEDA NAVA DURGA**

successfully completed and received a passing grade in

**DavidsonX.D005: Analyzing and Visualizing Data with Power BI**

a course of study offered by DavidsonX, an online learning initiative of Davidson College.

edX

**Verified Certificate**
Issued August 21, 2024

**Valid Certificate ID**
703bf59cab1f45d489e06174a80fb18c

IQAC

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

NULLCLASS

Issued Sep 15 2024

# CERTIFICATE OF TRAINING

THIS CERTIFICATE IS PRESENTED TO

## Navadurga Meda

has successfully completed online training on

**Data Analyst** and real-time project training on

**Learn To Build Real Time Twitter Analytics Dashboard - Power BI**

Vetriselvan G.
CEO

Verfiy at:

DOC ID: 66e6cb7a801ab9d74b192abd

IQAC

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

CCBP 4.0 ACADEMY NXT WAVE™

VERIFIED ACHIEVEMENT

# CERTIFICATE
## OF ACHIEVEMENT

Congratulations,

## Meda Nava Durga

on successfully completing the course,

## BUILD YOUR OWN STATIC WEBSITE

HTML CSS Bootstrap

IQAC

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

Issue Date:
**August 27, 2024**

Member of NASSCOM

Program designed by top alumni from Stanford Google IIT Bombay amazon IIT Delhi Microsoft

**Rahul A**
CEO, NxtWave

Verify at: https://certificates.ccbp.in/academy/static-website?id=WZHTKJINWK

4445

# CERTIFICATE

## *OF PARTICIPATION*

This certificate is proudly presented to

## Abdul Latheeef Shaik

*For participating in the* Game of Codes *of VVIT ACM'S National Level Tech Fest "**SPARDHA 2K24**"*

Verify at https://verification.givemycertificate.com/v/3ee7475c-040a-4c60-b831-bc0df0884eb7

**ACM Faculty Coordinator**

**Principal**

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

IQAC

# *Professional*
## Certificate

IBM

This is to certify that

## Abdul Latheef Shaik

successfully completed all courses and received passing grades for a Professional Certificate in

### IBM Data Science

a program offered by IBM, in collaboration with edX.

Rav Ahuja
Global Program Director
IBM
*IBM*

edX

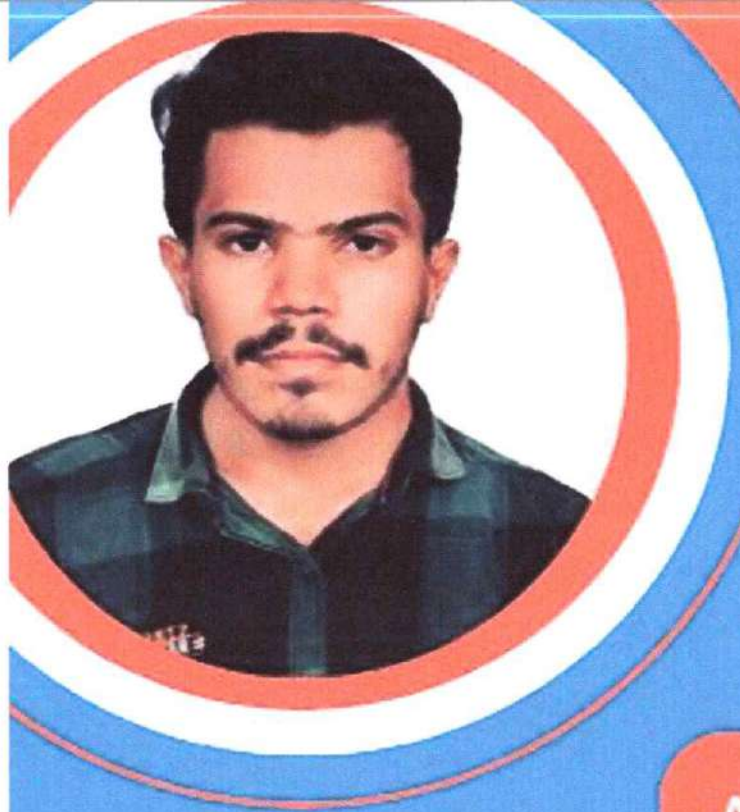
**PROFESSIONAL CERTIFICATE**
Issued August 2024

**VALID CERTIFICATE ID**
f7c1d462bb634cbaacbcc4131b5a72cf

**EFFORT**
49 hours

IQAC

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dt.), A.P.



Infosys | Springboard

Abdul Latheef

Infosys SpringBoard Intern

Project: Predicting Obesity levels using Machine learning

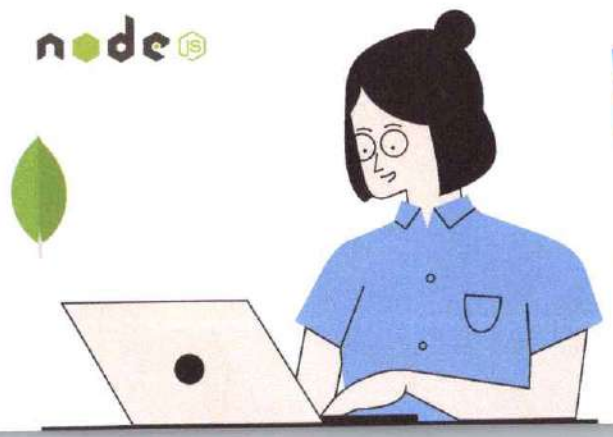
APNA
COLLEGE

# CERTIFICATE

## OF COMPLETION

Shaik Neeha Parveen

for successfully completing the course of
Delta (Full Stack Web Development).



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Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

CO-FOUNDER
**Shradha Khapra**

66ba20fc9fcae7277a039786

Infosys
Navigate your next

# COURSE COMPLETION CERTIFICATE

The certificate is awarded to

## THIPPINENI RAMYA

for successfully completing the course

## Programming Fundamentals using Python - Part 1

on August 18, 2024

Infosys | Springboard

*Congratulations! You make us proud!*

IQAC

Issued on: Sunday, August 18, 2024
To verify, scan the QR code at https://verify.onwingspan.com

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

Thirumala Arohi
Executive Vice President and Global Hea
Education, Training & Assessment (ETA)
Infosys Limited

Ministry of Education
Government of India

AICTE

MoE's INNOVATION CELL
(GOVERNMENT OF INDIA)

# Innovation, Design and Entrepreneurship (IDE) Bootcamp

**Edition 2 - Phase I**

## *Certificate of Participation*

This Certificate is awarded to

Guggilam Shanmukha Sambasiva Rao

for participating in Innovation, Design and Entrepreneurship (IDE) Bootcamp
from 23rd to 27th September 2024 at **GITAM (Deemed to be University), Visakhapatnam** organised by
All India Council for Technical Education (AICTE) & Ministry of Education's Innovation Cell (MIC)

| | | | |
|---|---|---|---|
| **Prof. T. G. Sitharam**<br>Chairman, AICTE<br>Ministry of Education | **Dr. Abhay Jere**<br>Chief Innovation Officer<br>Ministry of Education's Innovation Cell | **Prof. Y. Gouthama Rao**<br>Director/VC<br>GITAM (Deemed to be University) | **Rajeev Warrier**<br>Executive Vice President,<br>Wadhwani Entrepreneur |

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GITAM
DEEMED TO BE UNIVERSITY

WADHWANI FOUNDATION
ENTREPRENEURSHIP NETWORK
Knowledge Partner

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

# Verified
## Certificate

IBM

John Rofrano
Senior Technical Staff Member
*IBM*

This is to certify that

**Bogyam Jagadeesh**

successfully completed and received a passing grade in

**CD0115EN: DevOps Basics for Everyone**

a course of study offered by IBM, an online learning initiative of IBM.

edX

**Verified Certificate**
Issued September 27, 2024

**Valid Certificate ID**
12da9a593e1a479e9082f42e6cd8ad15

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Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

LinkedIn Learning  Microsoft

# Career Essentials in Cybersecurity by Microsoft and LinkedIn

Learning Path completed by Bogyam Jagadeesh
Sep 15, 2024 at 04:40PM UTC • 5 hours 31 minutes

Top skills covered

Cybersecurity | Information Security Awareness | Threat & Vulnerability Management

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Head of Global Content, Learning

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

LEARNING PATH COMPLETION

Certificate ID: e488467aa35fa947e4e3fafa182c712c8cafeddd0923839a0c9d2732d135e652

MVG INNOVATIONS

CONSULTING | TECHNOLOGY | TRANSFORMATION

# CERTIFICATE OF INTERNSHIP

This is to certify that

**MUNDRU SAI SRIJA**

has completed her internship from 12/07/2024 to 12/10/2024 in

**WEB DEVELOPMENT**

with overall performance rated as **A**

IQAC

MADHU NALLAN CHAKRAVARTHY
EXECUTIVE VICE PRESIDENT

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

BHARADWAJ MUKTHAVARAM
CEO & DIRECTOR

Elewayte

# CERTIFICATE

## OF INTERNSHIP

THIS CERTIFIES THAT

*G. Vinay Kumar*

has successfully completed an internship program with Elewayte from Jul-24 to Aug-24 . During the internship. He/She demonstrated a strong commitment to learning and developing his/her skills in the field of Machine Learning through hands-on projects

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Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.)

Scan to verify

Powered by Wipro DICE ID

**Giri Menta**
**CEO**

**Madhukar M**
**General Manager HR**

**ID:** IC720244854

ID: 0739C3947931

HackerRank

# Certificate

This is to certify that

## Vinay Kumar Guddati

has successfully cleared the assessment for the skill

**Python (Basic)**

IQAC

**13 Aug, 2024**

Date

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

**Harishankaran K**

CTO, HackerRank

ALICE SOFT
CRAFTING DIGITAL SUCCESS

NEC NARASARAOPETA ENGINEERING COLLEGE

# Certificate of Participation

THIS IS TO CERTIFY THAT

*Maddi C Dedeepya*

bearing the roll No: **22471A4432**

has successfully completed the workshop
"CODING DATA ALCHEMY: Unleashing Insights with Python Magic"
conducted from 29th January to 3rd February 2024, by the
***Data Science team*** of ***Alice Soft***
in collaboration with
***Dept of CSE(Data Science)***, Narasaraopet Engineering College.

**Dr. V.V.A.S Lakshmi**
HOD-CSE (Data Science)

**Venkata Karthik V**
Mentor, Alice Soft

**Dr. M. SREENIVASA KUMAR**
Principal

**Avinash S**
Technical Head, Alice Soft

Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

IQAC

ALICE SOFT
VIZAG

www.alicesoft.in

AUTODESK

# CERTIFICATE OF COMPLETION

## GORANTLA THIRUPATHAIAH

Has successfully completed:

**Introduction to Modeling and Design for Manufacturing**

Date issued: September 27, 2025

Duration: 14 hours



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Principal
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601, Palnadu (Dist.) A.P.