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Survey of IoT-Enabled Smart Gardening and Environmental Monitoring Systems

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Abstract: *In the contemporary fast-paced environment, the upkeep of a garden has become progressively challenging due to time constraints and inconsistent monitoring of plant requirements. Plants necessitate sufficient water, sunlight, and appropriate temperature conditions for optimal growth, while the surrounding area must also be kept clean and sanitary. To tackle these issues, this project introduces a Smart Garden and Monitoring System, an automated and sensor-driven solution that streamlines gardening activities while incorporating a waste management feature.*

The system utilizes a soil moisture sensor linked to an automatic water pump, which guarantees that plants receive irrigation whenever the soil dries out. This functionality prevents both overwatering and underwatering, thus conserving water and ensuring suitable soil conditions for plant vitality. An LDR (Light Dependent Resistor) sensor is incorporated to assess the light intensity that the plants receive, as sunlight is crucial for photosynthesis and overall growth. A temperature sensor continuously monitors the surrounding climatic conditions, assisting in determining whether the environmental temperature is conducive to plant development. Beyond plant monitoring, the project features a smart dustbin equipped with a detection system that signals whether the bin is full or empty. This not only enhances cleanliness but also mitigates the issue of waste overflow, thereby promoting hygiene in the garden area..

Keywords: Irrigation, remote monitoring, Arduino, mobile apps, sensors, soil moisture, smart farming, water conservation

I. INTRODUCTION

In recent years, the swift expansion of urbanization and hectic lifestyles has diminished the time individuals can allocate to gardening and effective waste management. To tackle these issues, intelligent technologies are being incorporated into everyday life to establish sustainable, automated, and efficient systems.

One such groundbreaking method is the Smart Garden and Monitoring System, which merges the concepts of the Internet of Things (IoT) and automation to facilitate plant growth, oversee environmental conditions, and guarantee cleanliness through an intelligent waste management system.The main objective of this project is to automate garden upkeep while minimizing human labor. The system features a soil moisture sensor that consistently tracks the moisture levels in the soil. Utilizing real-time data, the system autonomously regulates a water pump to irrigate the plants whenever the soil becomes dry. This guarantees that plants receive the appropriate amount of water without waste, thus fostering water conservation. An LDR (Light Dependent Resistor) sensor is incorporated to assess the sunlight intensity available to the plants.

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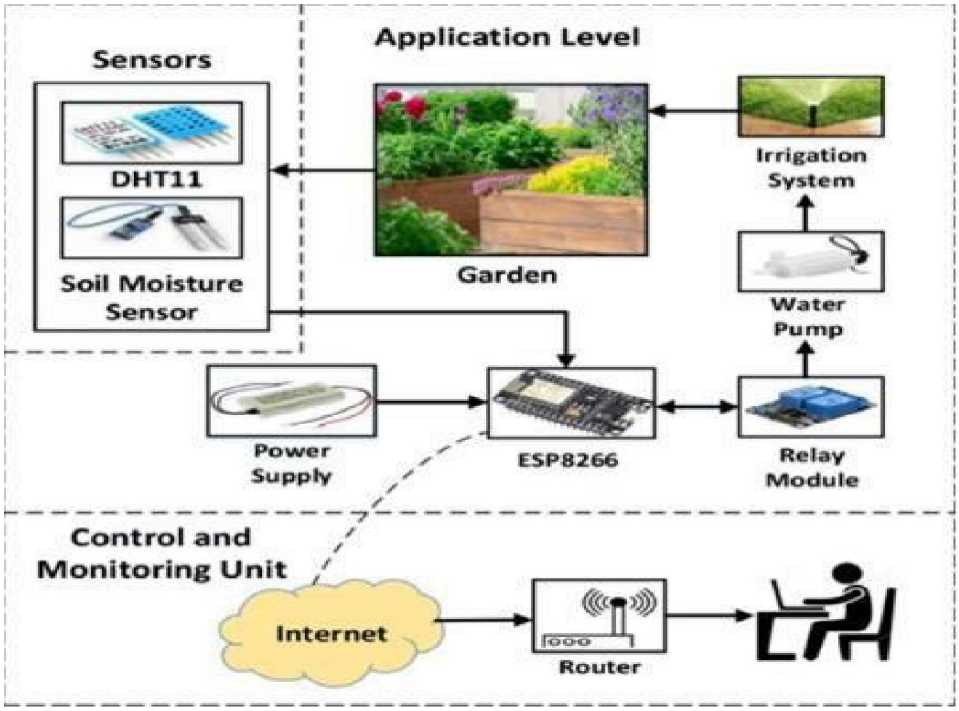

Fig. System Architecture of IoT-based Smart Garden Irrigation and Monitoring System

This data aids in monitoring the plants' exposure to natural light, which is vital for photosynthesis and overall growth. Likewise, a temperature sensor is employed to gauge the surrounding environmental conditions, allowing users to determine if the temperature is conducive to healthy plant growth. In addition to garden monitoring, the system also tackles waste management by including a smart dustbin.Equipped with an ultrasonic sensor, the dustbin can identify whether it is full or empty. This capability helps maintain hygiene and minimizes the risk of overflow, thereby promoting proper waste disposal in the garden area.

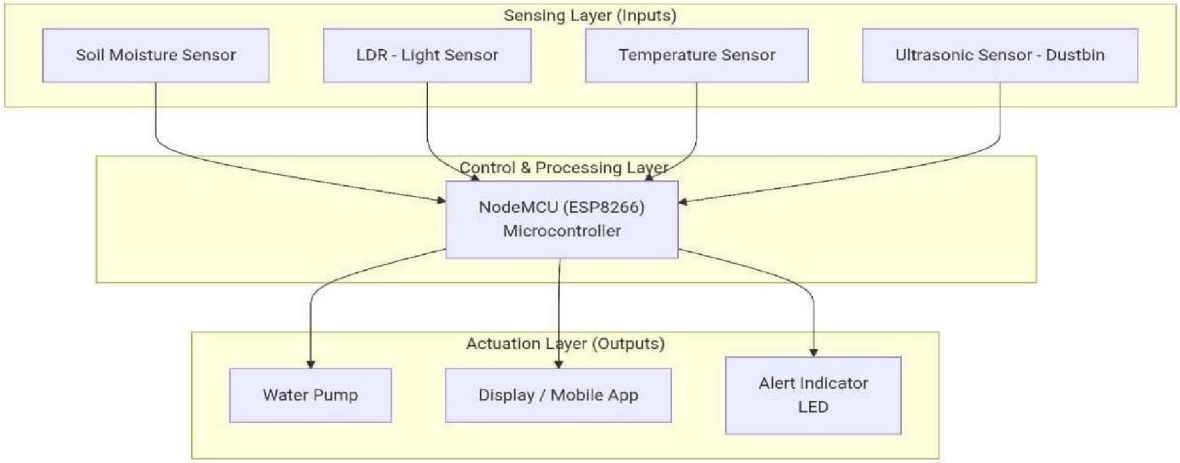

Fig. Working Flow

The proposed system consists of three primary layers: the sensing layer, the control and processing layer, and the actuation layer. The sensing layer gathers real-time environmental information using a variety of sensors. A soil moisture sensor identifies the moisture levels in the soil and activates irrigation when these levels drop below a certain threshold, ensuring

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that plants obtain the necessary water while conserving resources. The LDR sensor tracks the intensity of ambient light, which is essential for photosynthesis, while the temperature sensor assesses environmental conditions to ensure that plants thrive in an appropriate climate. Furthermore, an ultrasonic sensor is incorporated in the dustbin to monitor its capacity, sending alerts when it reaches full capacity to maintain cleanliness and hygiene.

The NodeMCU (ESP8266) microcontroller, which is at the heart of the system, processes the information that the sensors collect. It has Wi-Fi and can be connected to mobile apps or IoT systems for real-time monitoring. It automatically turns on the water pump, manages the warning LED, and updates the screen or mobile app based on sensor inputs. For instance, the alert LED illuminates when the trashcan is full or the environment is unusual, and the water pump is activated when the soil moisture content is low. In order to achieve automation, efficiency, and convenience in waste management and smart gardening, this integration guarantees both local decision-making and remote access, enabling users to monitor and control the system in real-time.

II. LITERATURE SURVEY

[1]. P.S. Prakash et al. It gives a system that integrates AI and IoT technologies for the plant health monitoring to sustainable agriculture. In a hydroponic system, where plants are grown without soil, the system was made to track vital indicators including light intensity, pH, humidity, and nutrient levels. The main goal was to minimize the waste of fertilizer and water while creating a regulated environment for plant growth. Because hydroponics currently consumes over 70–80% less water than conventional farming, this clever concept increased efficiency even more by only giving nutrients when needed.

[2] A. Morchid et al. It developed for a sustainable agriculture to smart irrigation system that makes use of real-time embedded technology. In order to make sure that irrigation is only turned on when plants need it, the model was created to track soil moisture and environmental factors. Reducing water waste while preserving crop health was the primary goal. Comparing their technology to traditional irrigation methods, they were able to save over 35–40% water savings.For making decisions in real time, the technology used includes embedded controllers, IoT sensors, and automatic watering mechanisms. This model aimed to reduce human intervention and conserve resources in order to connect sustainability with smart farming.

[3]. K. Thongkhao et al. It has proposed an IoT-based smart watering system to track soil conditions in a Thai pomelo garden. In order to guarantee ideal growth for fruit crops, the system was made to automatically raise soil moisture levels when they fell below a predetermined threshold. Its primary goal was to preserve good soil conditions while conserving water by only using it when necessary. When compared to conventional farming practices, the model's use of smart irrigation resulted in around 30–40% water savings.For real-time monitoring and control, IoT sensors, a microcontroller, and wireless communication were among the technologies utilized. Reducing human work and developing a sustainable watering system for expansive fruit crops were the goals of this strategy.

[4]. Mubashir Ali et al. It has developed an IOT-based smart garden and monitoring system by a continuously monitoring soil moisture, temperature, and humidity levels, the system sought to alleviate the difficulties associated with manual gardening. By only providing water when required, the primary goal was to reduce water waste and enhance plant health. Comparing the system to conventional watering techniques, the results indicated that 30–35% water savings may be achieved. By automating irrigation depending on current conditions, the model assured effective energy usage even while light conservation was not a primary focus.

[5]. K.S. Kunal et al. It was developed automated plant care and guarantee ideal growing circumstances for IoT-based smart plant monitoring system utilizing the NodeMCU microcontroller. Real-time soil moisture, temperature, and humidity monitoring by the system allows for automatic irrigation only when necessary. The primary goal was to decrease human labor in plant maintenance and reduce water waste. Nearly 30% water reductions were reported by the system, and improved environmental management indirectly increased lighting energy savings. This method uses timely irrigation and effective monitoring to guarantee healthier plant growth. NodeMCU, IoT-enabled sensors, cloud-based data storage, and remote monitoring interfaces were among the technologies used for user convenience. This model was designed to give both indoor and outdoor plants a intelligent, automated solution for sustainable gardening.

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[6]. D. S. et al. They have suggested a improved plant monitoring system for hydroponics that automates environmental and nutrient management through the use of IoT technology. In order to maximize plant development and resource utilization, the introduction emphasized the necessity of precision management in hydroponic farming. To guarantee healthy plant growth, the primary goal was to monitor nutrient levels, water quality, and environmental parameters. Approximately 40% water savings were accomplished by the system through the automation of irrigation and nutrient supply. The best conditions for hydroponic vegetables were maintained while electricity usage was decreased through the use of energy-efficient lights.IoT sensors, microcontrollers, cloud-based monitoring platforms, and automated actuators for accurate control were all part of the technology stack.

[7]. L. Renkuan et al. It has developed smart irrigation system for a greenhouse settings. The difficulties of manual irrigation and the requirement for exact management to promote plant growth while preserving water were highlighted in the introduction. The goal was to reduce water waste by putting in place an automated system that only irrigates when soil moisture falls below a certain threshold. In addition to achieving up to 35% water savings, the technology indirectly increased lighting energy savings through better environmental control. In greenhouse farming, this method guaranteed healthier plants and more effective use of resources.For real-time control and data logging, the technology used included soil moisture sensors, microcontrollers, automated valves, and IoT-enabled monitoring. The goal of this model was to develop a proof-of-concept smart irrigation solution that could increase crop productivity while using less water.

[8]. S.S. Varun et al. It was proposed an IOT-based smart monitoring and control system for garden with the goal of automating environmental management and irrigation. The introduction emphasized the necessity of employing real-time soil moisture, temperature, and humidity monitoring in order to minimize human labor and conserve resources. The primary goal was to use automated irrigation to optimize water usage and enhance plant health. Water savings of roughly 30 to 35% were reported by the system, and controlled environmental management indirectly assisted lighting energy reductions. This method saved waste and produced constant conditions for healthier plant growth.For real-time garden management, IoT sensors, NodeMCU microcontrollers, cloud platforms, and automated control mechanisms were among the technologies utilized.

[9]. M. Anwar et al. They had created a system for the difficulties of caring for indoor plants and the requirement for automated systems to maximize the delivery of light, water, and nutrients were highlighted in the introduction. The primary goal was to improve plant development while saving electricity and water, giving consumers easy remote control. Through automated management depending on plant demands, the system minimized needless artificial lighting and generated almost 30–40% water savings.For remote operation and data visualization, the technology stack comprised IoT sensors, microcontrollers, automated actuators, and mobile app integration. This model's goal was to provide an indoor gardening solution that is both resource-efficient and easy to utilize for urban dwellings. The outcomes demonstrated decreased manual labor, better plant health, and efficient use of resources.

[10]. S.T. Fauziah et al. It has developed a prototype of smart garden system that uses LoRa technology to allow for low-power, long-range communication. The necessity of effectively monitoring expansive garden spaces while avoiding excessive energy use was emphasized in the beginning. In order to save water and enhance plant health, the primary goal was to automate watering and environmental monitoring. In addition to achieving roughly 30% water savings, the technology indirectly increased lighting energy savings through improved environmental control.LoRa sensors, microcontrollers, cloud-based monitoring platforms, and automated irrigation systems were among the technologies used. Providing a **scalable and energy-efficient smart garden solution that can be remotely monitored over great distances was the aim of this approach.

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III. PROPOSED METHODOLOGY

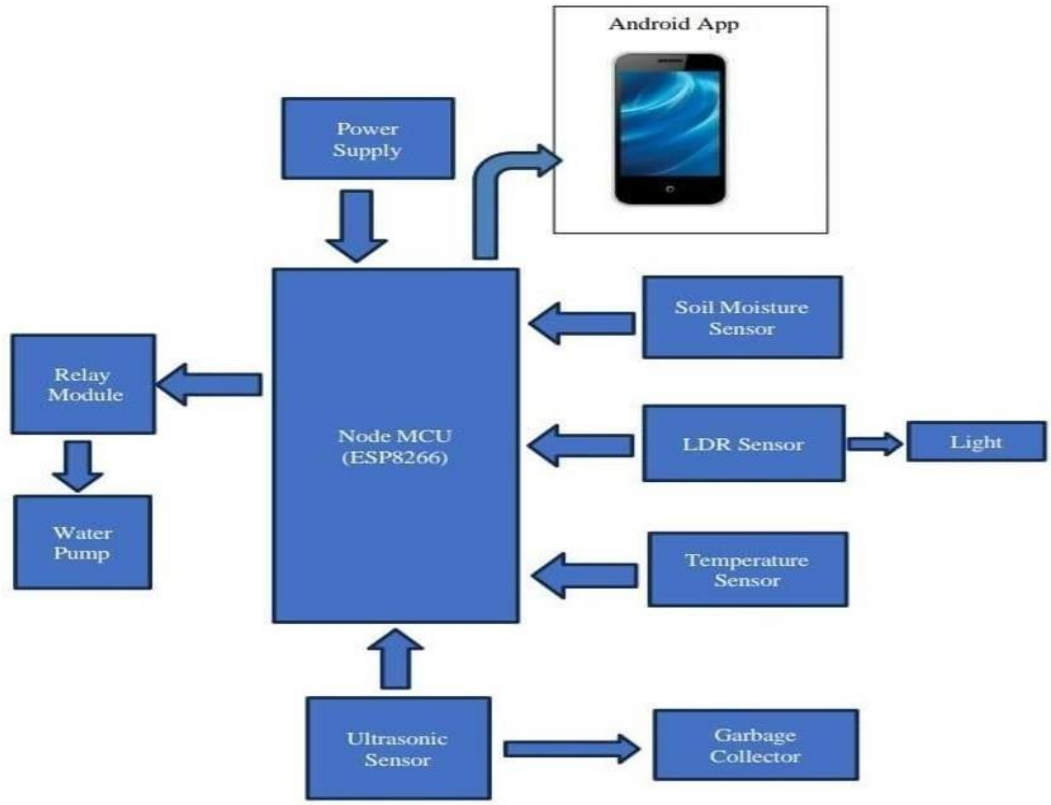

Fig 3. Block diagram of IoT Based Smart Smart Garden and Monitoring System

Node MCU (ESP8266)

The Node MCU (ESP8266) is a low-cost, open-source IoT development board that features the ESP- 12E module, which is built around the ESP8266 Wi-Fi system-on-chip (SoC) developed by Espressif Systems. It is perfect for Internet of Things (IoT) applications since it incorporates a 32-bit Tensilica L106 microcontroller operating at 80 or 160 MHz, as well as integrated Wi-Fi and a complete TCP/IP stack. In addition to having 17 general-purpose input/output (GPIO) pins and 4 MB of flash memory, the ESP-12E module supports UART, I2C, SPI, PWM, and a single 10-bit ADC input. Powered by either an external power supply or USB, the Node MCU runs on 3.3V logic and has an integrated USB-to-serial converter that makes programming using the Arduino IDE, PlatformIO, or other development tools simple. For applications like home automation, remote sensing, and smart environments, this makes it ideal for multi-parameter monitoring and control systems.

DHT11 Temperature

The DHT11 is a low-cost digital sensor used to measure temperature and humidity. It is simple to integrate with microcontrollers such as Node MCU because it just requires one data pin to deliver calibrated digital output. The sensor has a sampling rate of one reading per second, runs on 3.3V to 5V, and uses little power.

Soil Moisture Sensor

A straightforward, inexpensive analog sensor called the Soil Moisture Sensor. It is used to determine how much water is in soil. It is made up of two electrode-like probes. The sensor detects the resistance between the probes when it is put into

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soil; wet soil transmits electricity more readily (lower resistance), whereas dry soil conducts it less readily (greater resistance).
Voltage Range for Operation: 3.3V to 5V DC Output Signal: Digital and Analog Vcc: +5V Power; Pinout & Data: GND:The earth. Variable voltage is output by the A0 (Analog Output). The output voltage is higher in dry soil.

Relay Module

A Relay Module is an electrical switch that allows a low-power microcontroller like a Node MCU (ESP8266) to control high-voltage devices such as lights, fans, or pumps. It acts as an interface between low-voltage digital systems and high-voltage AC or DC loads. 5V DC (for the relay coil) is the operating voltage. Trigger Level: Depending on the module, either LOW (0V) or HIGH (3.3V/5V). Your device's output side: Common (COM): The main point of contact. " According to its specifications, its "range" is the highest voltage and current it can switch without risk.

Pump Motor

Operating Voltage: 5V DC (usually from a 5V regulator or a USB supply). Current Draw: Depending on the model and load, it typically ranges from 220mA to 500mA.A relay or motor driver must be used to control this excessive current because a microcontroller pin can normally only give 20–40 mA. A Pump Motor is an electromechanical device used to move fluids (such as water or other liquids) from one place to another. Small DC water pumps are frequently utilized in IoT and automation projects for uses such as liquid circulation, aquaponics, and automated plant watering systems.

LDR (Light Dependent Resistor)

Voltage Range for Operation: 3.3V to 5V DC Digital (HIGH/LOW) and analog (variable voltage) output signals are both available. Provides a variable voltage that is directly proportional to the intensity of the light (e.g., 0-5V). Lower LDR resistance equals higher voltage when there is more light. An LDR is a light-sensitive resistor whose resistance decreases as light intensity increases. Made typically from cadmium sulfide, it has high resistance in the dark and low resistance in bright light. Used in a voltage divider circuit, it provides an analog voltage output that microcontrollers like the Node MCU can read to measure light levels. Common applications include automatic lighting, day/night detection, and energy-saving systems.

Power Supply

A power supply delivers the necessary voltage and current to operate your Node MCU and its connected devices. Generally, the Node MCU utilizes a 5V USB power source that is regulated to 3.3V for the ESP8266 chip. A consistent power supply guarantees dependable performance, particularly when powering sensors or motors. In portable projects, batteries equipped with voltage regulators are frequently employed.

Ultrasonic Sensor

Operating Voltage: 5V DC Present Draw: ~15 mA. . Pinout & Data: Vcc: +5V Power. Frequency: 40 kHz (Ultrasonic). Echo (Output Pin): This pin goes HIGH for a period of time equal to the time it took for the sound wave to travel to the item and back. Trig (Input Pin): To start a measurement, send a brief 10µs HIGH pulse to this pin from your microcontroller. The smart garden area's primary goal is to maintain cleanliness and appropriate waste management. The system can use the Android app to alert users whether the dustbin is full or empty, allowing for timely waste collection.

Android App

Within your IoT-driven Smart Garden and Monitoring System, the Android application serves as a crucial interface connecting the garden system with the user. Its functions include: Remote Monitoring – The application enables users to view real-time sensor data (soil moisture, temperature, light intensity, dustbin status, etc.) from any location. Control Functions Users have the ability to remotely switch ON/OFF devices like the water pump or lights through the app.

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IV. CONCLUSION

The Smart Garden and Monitoring System has been created and executed to showcase how straightforward automation and sensor-based technologies can significantly enhance the processes involved in garden upkeep and environmental observation. This project illustrates that by utilizing sensors and automatic control units, tasks such as watering plants, assessing light conditions, tracking temperature, and ensuring cleanliness can be carried out reliably and systematically without the necessity for constant human intervention. The soil moisture sensor, which is integrated with the water pump, represents the most crucial component of this system. This sensor persistently measures the moisture content within the soil, and whenever it identifies dryness that exceeds a specified threshold, the water pump is automatically activated to provide irrigation for the plants.

This guarantees that the plants receive an appropriate amount of water as required. Once the soil moisture level returns to a satisfactory state, the pump will automatically deactivate. Consequently, the system effectively prevents both overwatering and underwatering, while simultaneously conserving water resources and promoting healthy plant growth. The LDR sensor is instrumental in recording the amount of sunlight or brightness available to the plants. Given that light is one of the fundamental requirements for photosynthesis, the availability of adequate sunlight has a direct influence on plant growth and development.

The sensor ensures that light intensity data is continuously monitored, which can aid in determining whether the garden is receiving sufficient natural light.The temperature sensor consistently measures the surrounding environmental temperature of the plants. Temperature directly influences the overall growth cycle of plants, and certain species exhibit sensitivity to temperature variations. By keeping track of this parameter.

REFERENCES

1. Mubashir Ali, Nosheen Kanwal Et al., "IoT based smart garden monitoring system using NodeMCU microcontroller," International Journal of Advanced and Applied Sciences, 2020.
2. K.S. Kunal, K. Suyash, T. Abhinay, K.R. Danendra, and A. Naushin, "IoT-based smart plant monitoring system using NodeMCU," i-manager's Journal on Electrical Engineering, 2023.
3. P.S. Prakash, S.A. Jabeen, L. Venkat, Y. Sagar, and M. Ismail, "Smart Hydroponic System: An AI and IoT-Powered Fertilizer and Plant Health Monitoring Solution for Sustainable Plant Growth," 2025 5th International Conference on Pervasive Computing and Social Networking (ICPCSN), pp. 1888-1894, 2025.
4. D. S, V. V, V.P. V., A. Koshy, S. Salim, and S. Philip, "Enhanced Plant Monitoring System for Hydroponics Farming Ecosystem using IoT," Global Research and Development Journals, 2020.
5. K. Thongkhao, S. Ruang-on, and F.W. Tina, "Development of an IoT-Based Smart Watering System for Monitoring and Increasing Soil Moisture Content in 'Tabtim Siam' Pomelo Garden in Pak Phanang District, Nakhon Si Thammarat Province, Southern Thailand," International Journal on Smart Sensing and Intelligent Systems, vol. 17, 2024.
6. L. Renkuan, Z. Shirui, Z. Xin, M. Wang, H. Wu, and L. Zhangzhong, "Development of smart irrigation systems based on real-time soil moisture data in a greenhouse: Proof of concept," Agricultural Water Management, Article ID 106632, 2020.
7. A. Morchid, R. Jebabra, R.E. Alami, M. Chargi, and B. Boukili, "Smart Agriculture for Sustainability: The Implementation of Smart Irrigation Using Real-Time Embedded System Technology," 2024 4th International Conference on Innovative Research in Applied Science, Engineering and Technology (IRASET),pp. 1-6, 2024.
8. S.S. Varun, S.M. Rao, M. P., S.S. Desai, and T.K. SH, "An IoT Based Smart Monitoring and Controlling System for Garden," 2023 7th International Conference on Design Innovation for 3Cs Compute Communicate Control (ICDI3C), pp. 141-144, 2023.
9. M. Anwar, H. Wadud, A. Rahman, S. Sazzad, D. Kundu, M. Rahman, A.A. Aishi, S.N. Nobel,
10. M. Amir,U.H. Bhuiyan, and Z. Ahmed, "Garduino: Sustainable Indoor Gardening Developed with Mobile Interface," Statistics, Optimization & Information Computing, 2024.

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11. S.T. Fauziah, S. Uyun, E. Mulyana, T. Yusuf, I. Nur, and R. Mardiati, "Prototype of Smart Garden System for Monitoring Horticulture Plants Based on LoRa Technology," 2022 8th International Conference on Wireless and Telematics (ICWT), pp. 1-5, 2022.
12. I.N. Azhar, R.A. Panggabean, H. Fakhrurroja, L. Meylani, and D. Pramesti, "Monitoring Greenhouse Room Temperature with Dragino LoRaWAN Gateway DLOS8N," 2023 3rd International Conference on Intelligent Cybernetics Technology & Applications (ICICYTA), pp. 402-407, 2023.
13. G. Choudhari, P. Dagale, I. Dashetwar, R.R. Desai, and A.A. Marathe, "IoT-based Smart Gardening System," Journal of Physics: Conference Series, vol. 2601, 2023.
14. Mubashir Ali, Nosheen Kanwal, and A. Hussain, "IoT based smart garden monitoring system using NodeMCU microcontroller," International Journal of Advanced and Applied Sciences, vol. 7, no. 8, pp. 117– 124, 2020
15. P. William, G. Ramu, L.R. Gupta, P. Sing, A. Shrivastava, and A.P. Srivastava, "Hybrid temperature and humidity monitoring system using IoT for smart garden," 2023 Second International Conference on Computing and Network Communications (CoCoNet), pp. 1–6, 2023.
16. M.A.B.M. Yaziz, S.M. Uddin, and M.I.A. Bakar, "Development of IoT on irrigation system for garden," 2022 IEEE 8th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA),pp. 1–5, 2022.
17. Godase, M. V., Mulani, A., Ghodak, M. R., Birajadar, M. G., Takale, M. S., & Kolte, M. A MapReduce and Kalman Filter based Secure IIoT Environment in Hadoop. Sanshodhak, Volume 19, June 2024.
18. Mulani, A. O., & Mane, P. B. (2017). Watermarking and cryptography based image authentication on reconfigurable platform. Bulletin of Electrical Engineering and Informatics, 6(2), 181-187.
19. Gadade, B., Mulani, A. O., & Harale, A. D. IoT Based Smart School Bus and Student Tracking System. Sanshodhak, Volume 19, June 2024.
20. Dhanawadel, A., Mulani, A. O., & Pise, A. C. IOT based Smart farming using Agri BOT. Sanshodhak, Volume 20, June 2024.
21. Mulani, A., & Mane, P. B. (2016). DWT based robust invisible watermarking. Scholars' Press.
22. R. G. Ghodke, G. B. Birajdar, A.O. Mulani, G.N. Shinde, R.B. Pawar, Design and Development of an Efficient and Cost-Effective surveillance Quadcopter using Arduino, Sanshodhak, Volume 20, June 2024.
23. R. G. Ghodke, G. B. Birajdar, A.O. Mulani, G.N. Shinde, R.B. Pawar, Design and Development of Wireless Controlled ROBOT using Bluetooth Technology, Sanshodhak, Volume 20, June 2024.
24. Swami, S. S., & Mulani, A. O. (2017, August). An efficient FPGA implementation of discrete wavelet transform for image compression. In 2017 International Conference on Energy, Communication, Data Analytics and Soft Computing (ICECDS) (pp. 3385-3389). IEEE.
25. Mane, P. B., & Mulani, A. O. (2018). High speed area efficient FPGA implementation of AES algorithm. International Journal of Reconfigurable and Embedded Systems, 7(3), 157-165.
26. Mulani, A. O., & Mane, P. B. (2016). Area efficient high speed FPGA based invisible watermarking for image authentication. Indian journal of Science and Technology, 9(39), 1-6.
27. Kashid, M. M., Karande, K. J., & Mulani, A. O. (2022, November). IoT-based environmental parameter monitoring using machine learning approach. In Proceedings of the International Conference on Cognitive and Intelligent Computing: ICCIC 2021, Volume 1 (pp. 43-51). Singapore: Springer Nature Singapore.
28. Nagane, U. P., & Mulani, A. O. (2021). Moving object detection and tracking using Matlab. Journal of Science and Technology, 6(1), 2456-5660.
29. Kulkarni, P. R., Mulani, A. O., & Mane, P. B. (2016). Robust invisible watermarking for image authentication. In Emerging Trends in Electrical, Communications and Information Technologies: Proceedings of ICECIT-2015 (pp. 193-200). Singapore: Springer Singapore.
30. Ghodake, M. R. G., & Mulani, M. A. (2016). Sensor based automatic drip irrigation system. Journal for Research, 2(02).
31. Mandwale, A. J., & Mulani, A. O. (2015, January). Different Approaches For Implementation of Viterbi decoder on reconfigurable platform. In 2015 International Conference on Pervasive Computing (ICPC) (pp. 1-4). IEEE.

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32. Jadhav, M. M., Chavan, G. H., & Mulani, A. O. (2021). Machine learning based autonomous fire combat turret. Turkish Journal of Computer and Mathematics Education, 12(2), 2372-2381.
33. Shinde, G., & Mulani, A. (2019). A robust digital image watermarking using DWT-PCA. International Journal of Innovations in Engineering Research and Technology, 6(4), 1-7.
34. Mane, D. P., & Mulani, A. O. (2019). High throughput and area efficient FPGA implementation of AES algorithm. International Journal of Engineering and Advanced Technology, 8(4).
35. Mulani, A. O., & Mane, D. P. (2017). An Efficient implementation of DWT for image compression on reconfigurable platform. International Journal of Control Theory and Applications, 10(15), 1-7.
36. Deshpande, H. S., Karande, K. J., & Mulani, A. O. (2015, April). Area optimized implementation of AES algorithm on FPGA. In 2015 International Conference on Communications and Signal Processing (ICCSP) (pp. 0010-0014). IEEE.
37. Deshpande, H. S., Karande, K. J., & Mulani, A. O. (2014, April). Efficient implementation of AES algorithm on FPGA. In 2014 International Conference on Communication and Signal Processing (pp. 1895-1899). IEEE.
38. Kulkarni, P., & Mulani, A. O. (2015). Robust invisible digital image mamarking using discrete wavelet transform. International Journal of Engineering Research & Technology (IJERT), 4(01), 139-141.
39. Mulani, A. O., Jadhav, M. M., & Seth, M. (2022). Painless Non‐invasive blood glucose concentration level estimation using PCA and machine learning. The CRC Book entitled Artificial Intelligence, Internet of Things (IoT) and Smart Materials for Energy Applications.
40. Mulani, A. O., & Shinde, G. N. (2021). An approach for robust digital image watermarking using DWT‐PCA. Journal of Science and Technology, 6(1).
41. Mulani, A. O., & Mane, P. B. (2014, October). Area optimization of cryptographic algorithm on less dense reconfigurable platform. In 2014 International Conference on Smart Structures and Systems (ICSSS) (pp. 86-89). IEEE.
42. Jadhav, H. M., Mulani, A., & Jadhav, M. M. (2022). Design and development of chatbot based on reinforcement learning. Machine Learning Algorithms for Signal and Image Processing, 219-229.
43. Mulani, A. O., & Mane, P. (2018). Secure and area efficient implementation of digital image watermarking on reconfigurable platform. International Journal of Innovative Technology and Exploring Engineering, 8(2), 56-61.
44. Kalyankar, P. A., Mulani, A. O., Thigale, S. P., Chavhan, P. G., & Jadhav, M. M. (2022). Scalable face image retrieval using AESC technique. Journal Of Algebraic Statistics, 13(3), 173-176.
45. Takale, S., & Mulani, A. (2022). DWT-PCA based video watermarking. Journal of Electronics, Computer Networking and Applied Mathematics (JECNAM) ISSN, 2799-1156.
46. Kamble, A., & Mulani, A. O. (2022). Google assistant based device control. Int. J. of Aquatic Science, 13(1), 550-555.
47. Kondekar, R. P., & Mulani, A. O. (2017). Raspberry Pi based voice operated Robot. International Journal of Recent Engineering Research and Development, 2(12), 69-76.
48. Ghodake, R. G., & Mulani, A. O. (2018). Microcontroller based automatic drip irrigation system. In Techno-Societal 2016: Proceedings of the International Conference on Advanced Technologies for Societal Applications (pp. 109-115). Springer International Publishing.
49. Mulani, A. O., Birajadar, G., Ivković, N., Salah, B., & Darlis, A. R. (2023). Deep learning based detection of dermatological diseases using convolutional neural networks and decision trees. Traitement du Signal, 40(6), 2819.
50. Boxey, A., Jadhav, A., Gade, P., Ghanti, P., & Mulani, A. O. (2022). Face Recognition using Raspberry Pi. Journal of Image Processing and Intelligent Remote Sensing (JIPIRS) ISSN, 2815-0953.
51. Patale, J. P., Jagadale, A. B., Mulani, A. O., & Pise, A. (2023). A Systematic survey on Estimation of Electrical Vehicle. Journal of Electronics, Computer Networking and Applied Mathematics (JECNAM) ISSN, 2799-1156.

IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 4, October 2025
Impact Factor: 7.67

52. Gadade, B., & Mulani, A. (2022). Automatic System for Car Health Monitoring. International Journal of Innovations in Engineering Research and Technology, 57-62.
53. Shinde, M. R. S., & Mulani, A. O. (2015). Analysisof Biomedical Image Using Wavelet Transform. International Journal of Innovations in Engineering Research and Technology, 2(7), 1-7.
54. Mandwale, A., & Mulani, A. O. (2014, December). Implementation of convolutional encoder & different approaches for viterbi decoder. In IEEE International Conference on Communications, Signal Processing Computing and Information technologies.
55. Mulani, A. O., Jadhav, M. M., & Seth, M. (2022). Painless machine learning approach to estimate blood glucose level with non-invasive devices. In Artificial intelligence, internet of things (IoT) and smart materials for energy applications (pp. 83-100). CRC Press.
56. Maske, Y., Jagadale, A. B., Mulani, A. O., & Pise, A. C. (2023). Development of BIOBOT system to assist COVID patient and caretakers. European Journal of Molecular & Clinical Medicine, 10(01), 2023.
57. Utpat, V. B., Karande, D. K., & Mulani, D. A. Grading of Pomegranate Using Quality Analysis ‖ . International Journal for Research in Applied Science & Engineering Technology (IJRASET), 10.
58. Takale, S., & Mulani, D. A. (2022). Video Watermarking System. International Journal for Research in Applied Science & Engineering Technology (IJRASET), 10.
59. Mandwale, A., & Mulani, A. O. (2015, January). Different approaches for implementation of Viterbi decoder. In IEEE international conference on pervasive computing (ICPC).
60. Maske, Y., Jagadale, M. A., Mulani, A. O., & Pise, A. (2021). Implementation of BIOBOT System for COVID Patient and Caretakers Assistant Using IOT. International Journal of Information Technology and, 30-43.
61. Mulani, A. O., & Mane, D. P. (2016). Fast and Efficient VLSI Implementation of DWT for Image Compression. International Journal for Research in Applied Science & Engineering Technology, 5, 1397-1402.
62. Kambale, A. (2023). Home automation using google assistant. UGC care approved journal, 32(1), 1071-1077.
63. Pathan, A. N., Shejal, S. A., Salgar, S. A., Harale, A. D., & Mulani, A. O. (2022). Hand gesture controlled robotic system. Int. J. of Aquatic Science, 13(1), 487-493.
64. Korake, D. M., & Mulani, A. O. (2016). Design of Computer/Laptop Independent Data transfer system from one USB flash drive to another using ARM11 processor. International Journal of Science, Engineering and Technology Research.
65. Mandwale, A., & Mulani, A. O. (2016). Implementation of High Speed Viterbi Decoder using FPGA. International Journal of Engineering Research & Technology, IJERT.
66. Kolekar, S. D., Walekar, V. B., Patil, P. S., Mulani, A. O., & Harale, A. D. (2022). Password Based Door Lock System. Int. J. of Aquatic Science, 13(1), 494-501.
67. Shinde, R., & Mulani, A. O. (2015). Analysis of Biomedical Image ‖ . International Journal on Recent & Innovative trend in technology (IJRITT).
68. Sawant, R. A., & Mulani, A. O. (2022). Automatic PCB Track Design Machine. International Journal of Innovative Science and Research Technology, 7(9).
69. ABHANGRAO, M. R., JADHAV, M. S., GHODKE, M. P., & MULANI, A. (2017). Design And Implementation Of 8-bit Vedic Multiplier. International Journal of Research Publications in Engineering and Technology (ISSN No: 2454-7875).
70. Gadade, B., Mulani, A. O., & Harale, A. D. (2024). Iot based smart school bus and student monitoring system. Naturalista Campano, 28(1), 730-737.
71. Mulani, D. A. O. (2024). A Comprehensive Survey on Semi-Automatic Solar-Powered Pesticide Sprayers for Farming. Journal of Energy Engineering and Thermodynamics (JEET) ISSN, 2815-0945.
72. Salunkhe, D. S. S., & Mulani, D. A. O. (2024). Solar Mount Design Using High-Density Polyethylene. NATURALISTA CAMPANO, 28(1).
73. Seth, M. (2022). Painless Machine learning approach to estimate blood glucose level of Non-Invasive device. Artificial Intelligence, Internet of Things (IoT) and Smart Materials for Energy Applications.

IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 4, October 2025
Impact Factor: 7.67

74. Kolhe, V. A., Pawar, S. Y., Gohery, S., Mulani, A. O., Sundari, M. S., Kiradoo, G., ... & Sunil, J. (2024). Computational and experimental analyses of pressure drop in curved tube structural sections of Coriolis mass flow metre for laminar flow region. Ships and Offshore Structures, 19(11), 1974-1983.
75. Basawaraj Birajadar, G., Osman Mulani, A., Ibrahim Khalaf, O., Farhah, N., G Gawande, P., Kinage, K., & Abdullah Hamad, A. (2024). Epilepsy identification using hybrid CoPrO-DCNN classifier. International Journal of Computing and Digital Systems, 16(1), 783-796.
76. Kedar, M. S., & Mulani, A. (2021). IoT Based Soil, Water and Air Quality Monitoring System for Pomegranate Farming. Journal of Electronics, Computer Networking and Applied Mathematics (JECNAM) ISSN, 2799-1156.
77. Godse, A. P. A.O. Mulani (2009). Embedded Systems (First Edition).
78. Pol, R. S., Bhalerao, M. V., & Mulani, A. O. A real time IoT based System Prediction and Monitoring of Landslides. International Journal of Food and Nutritional Sciences, Volume 11, Issue 7, 2022.
79. Mulani, A. O., Sardey, M. P., Kinage, K., Salunkhe, S. S., Fegade, T., & Fegade, P. G. (2025). ML-powered Internet of Medical Things (MLIOMT) structure for heart disease prediction. Journal of Pharmacology and Pharmacotherapeutics, 16(1), 38-45.
80. Aiwale, S., Kolte, M. T., Harpale, V., Bendre, V., Khurge, D., Bhandari, S., ... & Mulani, A. O. (2024). Non-invasive Anemia Detection and Prediagnosis. Journal of Pharmacology and Pharmacotherapeutics, 15(4), 408-416.
81. Mulani, A. O., Bang, A. V., Birajadar, G. B., Deshmukh, A. B., Jadhav, H. M., & Liyakat, K. K. S. (2024). IoT Based Air, Water, and Soil Monitoring System for Pomegranate Farming. Annals of Agri-Bio Research, 29(2), 71-86.
82. Kulkarni, T. M., & Mulani, A. O. (2024). Face Mask Detection on Real Time Images and Videos using Deep Learning. International Journal of Electrical Machine Analysis and Design (IJEMAD), 2(1).
83. Thigale, S. P., Jadhav, H. M., Mulani, A. O., Birajadar, G. B., Nagrale, M., & Sardey, M. P. (2024). Internet of things and robotics in transforming healthcare services. Afr J Biol Sci (S Afr), 6(6), 1567-1575.
84. Pol, D. R. S. (2021). Cloud Based Memory Efficient Biometric Attendance System Using Face Recognition. Stochastic Modeling & Applications, 25(2).
85. Nagtilak, M. A. G., Ulegaddi, M. S. N., Adat, M. A. S., & Mulani, A. O. (2021). Breast Cancer Prediction using Machine Learning.
86. Rahul, G. G., & Mulani, A. O. (2016). Microcontroller Based Drip Irrigation System.
87. Kulkarni, T. M., & Mulani, A. O. Deep Learning Based Face-Mask Detection: An Approach to Reduce Pandemic Spreads in Human Healthcare. African Journal of Biological Sciences, 6(6), 2024.
88. Mulani, A., & Mane, P. B. (2016). DWT based robust invisible watermarking. Scholars' Press.
89. Dr. Vaishali Satish Jadhav, Dr. Shweta Sadanand Salunkhe, Dr. Geeta Salunkhe, Pranali Rajesh Yawle, Dr. Rahul S. Pol, Dr. Altaf Osman Mulani, Dr. Manish Rana, Iot Based Health Monitoring System for Human, Afr. J. Biomed. Res. Vol. 27 (September 2024).
90. Dr. Vaishali Satish Jadhav, Geeta D. Salunke, Kalyani Ramesh Chaudhari, Dr. Altaf Osman Mulani, Dr. Sampada Padmakar Thigale, Dr. Rahul S. Pol, Dr. Manish Rana, Deep Learning-Based Face Mask Recognition in Real-Time Photos and Videos, Afr. J. Biomed. Res. Vol. 27 (September 2024).
91. Altaf Osman Mulani, Electric Vehicle Parameters Estimation Using Web Portal, Recent Trends in Electronics & Communication Systems, Volume 10, Issue 3, 2023.
92. Aryan Ganesh Nagtilak, Sneha Nitin Ulegaddi, Mahesh Mane, Altaf O. Mulani, Automatic Solar Powered Pesticide Sprayer for Farming, International Journal of Microwave Engineering and Technology, Volume 9 No. 2, 2023.
93. Annasaheb S. Dandage, Vitthal R. Rupnar, Tejas A Pise, and A. O. Mulani, Real-Time Language Translation Application Using Tkinter. International Journal of Digital Communication and Analog Signals. 2025; 11(01): -p.
94. AnnaSaheb S Dandage, Vitthal R. Rupnar, Tejas A Pise, and A. O. Mulani, IoT-Powered Weather Monitoring and Irrigation Automation: Transforming Modern Farming Practices. . 2025; 11(01): -p.

IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429 Volume 5, Issue 4, October 2025 Impact Factor: 7.67

95. Mulani, A.O., Kulkarni, T.M. (2025). Face Mask Detection System Using Deep Learning: A Comprehensive Survey. In: Singh, S., Arya, K.V., Rodriguez, C.R., Mulani, A.O. (eds) Emerging Trends in Artificial Intelligence, Data Science and Signal Processing. AIDSP 2023. Communications in Computer and Information Science, vol 2439. Springer, Cham. https://doi.org/10.1007/978-3-031-88759-8_3.
96. Karve, S., Gangonda, S., Birajadar, G., Godase, V., Ghodake, R., Mulani, A.O. (2025). Optimized Neural Network for Prediction of Neurological Disorders. In: Singh, S., Arya, K.V., Rodriguez, C.R., Mulani, A.O. (eds) Emerging Trends in Artificial Intelligence, Data Science and Signal Processing. AIDSP 2023. Communications in Computer and Information Science, vol 2440. Springer, Cham. https://doi.org/10.1007/978-3-031-88762-8_18.
97. Saurabh Singh, Karm Veer Arya, Ciro Rodriguez Rodriguez, and Altaf Osman Mulani, Emerging Trends in Artificial Intelligence, Data Science and Signal Processing, Communications in Computer and Information Science (CCIS), volume 2440.
98. Saurabh Singh, Karm Veer Arya, Ciro Rodriguez Rodriguez, and Altaf Osman Mulani, Emerging Trends in Artificial Intelligence, Data Science and Signal Processing, Communications in Computer and Information Science (CCIS), volume 2439.
99. Godase, V., Mulani, A., Pawar, A., & Sahani, K. (2025). A Comprehensive Review on PIR Sensor-Based Light Automation Systems. International Journal of Image Processing and Smart Sensors, 1(1), 22-29.
100. Godase, V., Mulani, A., Takale, S., & Ghodake, R. (2025). Comprehensive Review on Automated Field Irrigation using Soil Image Analysis and IoT. Journal of Advance Electrical Engineering and Devices, 3(1), 46-55.
101. Altaf Osman Mulani, Deshmukh M., Jadhav V., Chaudhari K., Mathew A.A., Shweta Salunkhe. Transforming Drug Therapy with Deep Learning: The Future of Personalized Medicine. Drug Research. 2025 Aug 29.
102. Altaf O. Mulani, Vaibhav V. Godase, Swapnil R. Takale, Rahul G. Ghodake (2025), Image Authentication Using Cryptography and Watermarking, International Journal of Image Processing and Smart Sensors, Vol. 1, Issue 2, pp 27-34.
103. Altaf O. Mulani, Vaibhav V. Godase, Swapnil R. Takale, Rahul G. Ghodake (2025), Advancements in Artificial Intelligence: Transforming Industries and Society, International Journal of Artificial Intelligence of Things (AIoT) in Communication Industry, Vol. 1, Issue 2, pp 1-5.
104. Altaf O. Mulani, Vaibhav V. Godase, Swapnil R. Takale, Rahul G. Ghodake (2025), AI-Powered Predictive Analytics in Healthcare: Revolutionizing Disease Diagnosis and Treatment, Journal of Advance Electrical Engineering and Devices, Vol. 3, Issue 2, pp 27-34.
105. Godase, V., Mulani, A., Takale, S., & Ghodake, R. (2025). A Holistic Review of Automatic Drip Irrigation Systems: Foundations and Emerging Trends. Available at SSRN 5247778.
106. V. Godase, R. Ghodake, S. Takale, and A. Mulani, ―Design and Optimization of Reconfigurable Microwave Filters Using AI Techniques, International Journal of RF and Microwave Communication Technologies, vol. 2, no. 2, pp.26–41, Aug. 2025.
107. V. Godase, A. Mulani, R. Ghodake, S. Takale, "Automated Water Distribution Management and Leakage Mitigation Using PLC Systems," Journal of Control and Instrumentation Engineering, vol.11, no. 3, pp. 1-8, Aug. 2025.
108. V. Godase, A. Mulani, R. Ghodake, S. Takale, "PLC-Assisted Smart Water Distribution with Rapid Leakage Detection and Isolation," Journal of Control Systems and Converters, vol. 1, no. 3, pp. 1-13, Aug. 2025.
109. V. V. Godase, S. R. Takale, R. G. Ghodake, and A. Mulani, "Attention Mechanisms in Semantic Segmentation of Remote Sensing Images," Journal of Advancement in Electronics Signal Processing, vol. 2, no. 2, pp. 45–58, Aug. 2025.
110. D. Waghmare, A. Mulani, S. R. Takale, V. Godase, and A. Mulani, "A Comprehensive Review on Automatic Fruit Sorting and Grading Techniques with Emphasis on Weight-based Classification," Research & Review: Electronics and Communication Engineering, vol. 2, no. 3, pp. 1-10, Oct. 2025.

IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 4, October 2025
Impact Factor: 7.67

111. Karande, K. J., & Talbar, S. N. (2014). Independent component analysis of edge information for face recognition. Springer India.
112. Karande, K. J., & Talbar, S. N. (2008). Face recognition under variation of pose and illumination using independent component analysis. ICGST-GVIP, ISSN.
113. Kawathekar, P. P., & Karande, K. J. (2014, July). Severity analysis of Osteoarthritis of knee joint from X-ray images: A Literature review. In 2014 International Conference on Signal propagation and computer technology (ICSPCT 2014) (pp. 648-652). IEEE.
114. Daithankar, M. V., Karande, K. J., & Harale, A. D. (2014, April). Analysis of skin color models for face detection. In 2014 International Conference on Communication and Signal Processing (pp. 533-537). IEEE.
115. Karande, J. K., Talbar, N. S., & Inamdar, S. S. (2012, May). Face recognition using oriented Laplacian of Gaussian (OLOG) and independent component analysis (ICA). In 2012 Second International Conference on Digital Information and Communication Technology and it's Applications (DICTAP) (pp. 99-103). IEEE.
116. Shubham Salunkhe, Pruthviraj Zambare, Sakshi Shinde, S. K. Godase. (2024). API Development for Cloud Parameter Curation International. Journal of Electrical and Communication Engineering Technology, 2(1). https://doi.org/10.37591/ijecet
117. Badave, A., Pawale, A., Andhale, T., Godase, S. K., & STM JOURNALS. (2024). Smart home safety using fire and gas detection system. Recent Trends in Fluid Mechanics, 1, 35–43. https://journals.stmjournals.com/rtfm
118. Asabe, H., Asabe, R., Lengare, O., & Godase, S. (2025). IOT- BASED STORAGE SYSTEM FOR MANAGING VOLATILE MEDICAL RESOURCES IN HEALTHCARE FACILITIES. INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS), 05(03), 2427–2433. https://www.ijprems.com
119. Karche, S. N., Mulani, A. O., Department of Electronics, SKN Sinhgad College of Engineering, Korti, & University of Solapur, Maharashtra, India. (2018). AESC Technique for Scalable Face Image Retrieval. International Journal of Innovative Research in Computer and Communication Engineering, 6(4), 3404–3405.
120. https://doi.org/10.15680/IJIRCCE.2018.0604036
121. Bankar, A. S., Harale, A. D., & Karande, K. J. (2021). Gestures Controlled Home Automation using Deep Learning: A Review. International Journal of Current Engineering and Technology, 11(06), 617–621. https://doi.org/10.14741/ijcet/v.11.6.4
122. Mali, A. S., Ghadge, S. K., Adat, A. S., & Karande, S. V. (2024). Intelligent Medication Management System. IJSRD - International Journal for Scientific Research & Development, Vol. 12(Issue 3).
123. Water Level Control, Monitoring and Altering System by using GSM in Irrigation Based on Season. (2019). In International Research Journal of Engineering and Technology (IRJET) (Vol. 06, Issue 04, p. 1035) [Journal-article]. https://www.irjet.net
124. Modi, S., Misal, V., Kulkarni, S., & Mali A.S. (2025). Hydroponic Farming Monitoring System - Automated system to monitor and control nutrient and pH levels. In Journal of Microcontroller Engineering and Applications (Vol. 12, Issue 3, pp. 11–16). https://doi.org/10.37591/JoMEA
125. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "VGHN: variations aware geometric moments and histogram features normalization for robust uncontrolled face recognition", International Journal of Information Technology, https://doi.org/10.1007/s41870-021-00703-0.
126. Siddheshwar Gangonda and Prachi Mukherji, "Speech Processing for Marathi Numeral Recognition using MFCC & DTW Features", International Journal of Engineering Research And Applications (IJERA) pp. 118-122, ISSN: 2248-9622.
127. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "Recognition of Marathi Numerals Using MFCC and DTW Features", Book Title: Recent Trends on Image Processing and Pattern Recognition, RTIP2R 2018, CCIS 1037, pp. 1–11, © Springer Nature Singapore Pte Ltd. 2019 https://doi.org/10.1007/978-981-13-9187-3_17.

128. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "Analysis of Face Recognition Algorithms for Uncontrolled Environments", Book Title: Computing, Communication and Signal Processing, pp. 919–926, © Springer Nature Singapore Pte Ltd. 2018.
129. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "Recognition of Marathi Numerals using MFCC and DTW Features", 2nd International Conference on Recent Trends in Image Processing and Pattern Recognition (RTIP2R 2018), 21th -22th Dec., 2018, organized by Solapur University, Solapur in collaboration with University of South Dakota (USA) and Universidade de Evora (Portugal), India.
130. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "A Comprehensive Survey of Face Databases for Constrained and Unconstrained Environments", 2nd IEEE Global Conference on Wireless Computing & Networking (GCWCN-2018), 23th-24th Nov., 2018, organized by STES's Sinhgad Institute of Technology, Lonavala, India.
131. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "An Extensive Survey of Prominent Researches in Face Recognition under different Conditions", 4th International Conference on Computing, Communication, Control And Automation (ICCUBEA-2018), 16th to 18th Aug. 2018 organized by Pimpri Chinchwad College of Engineering (PCCOE), Pune, India.
132. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "Analysis of Face Recognition Algorithms for Uncontrolled Environments", 3rd International Conference on Computing, Communication and Signal Processing (ICCASP 2018), 26th-27th Jan.2018, organized by Dr. BATU, Lonere, India.
133. Siddheshwar Gangonda and Prachi Mukherji, "Speech Processing for Marathi Numeral Recognition", International Conference on Recent Trends, Feb 2012, IOK COE, Pune.
134. S. S. Gangonda, "Bidirectional Visitor Counter with automatic Door Lock System", National Conference on Computer, Communication and Information Technology (NCCCIT-2018), 30th and 31st March 2018 organized by Department of Electronics and Telecommunication Engineering, SKN SCOE, Korti, Pandharpur.
135. Siddheshwar Gangonda and Prachi Mukherji, "Speech Processing for Marathi Numeral Recognition using MFCC & DTW Features", ePGCON 2012, 23rd and 24th April 2012 organized by Commins COE for Woman, Pune.
136. Siddheshwar Gangonda and Prachi Mukherji, "Speech Processing for Marathi Numeral Recognition", National Conference on Emerging Trends in Engineering and Technology (VNCET'12), 30th March 2012 organized by Vidyavardhini's College of Engineering and Technology, Vasai Road, Thane.
137. Siddheshwar Gangonda and Prachi Mukherji, "Speech Processing for Marathi Numeral Recognition", ePGCON 2011, 26th April 2011 organized by MAEER's MIT, Kothrud, Pune-38.
138. Siddheshwar Gangonda, "Medical Image Processing", Aavishkar-2K7, 17th and 18th March 2007 organized by Department of Electronics and Telecommunication Engineering, SVERI's COE, Pandharpur.
139. Siddheshwar Gangonda, "Image enhancement & Denoising", VISION 2k7, 28th Feb-2nd March 2007 organized by M.T.E. Society's Walchand College of Engineering, Sangli.
140. Siddheshwar Gangonda, "Electromagnetic interference & compatibility" KSHITIJ 2k6, 23rd and 24th Sept. 2006 organized by Department of Mechanical Engineering, SVERI's COE, Pandharpur.
141. A. Pise and K. Karande, "A genetic Algorithm-Driven Energy-Efficient routing strategy for optimizing performance in VANETs," Engineering Technology and Applied Science Research, vol. 15, no. 5, 2025, [Online]. Available: https://etasr.com/index.php/ETASR/article/view/12744
142. A. C. Pise, K. J. Karande, "Investigating Energy-Efficient Optimal Routing Protocols for VANETs: A Comprehensive Study", ICT for Intelligent Systems, Lecture Notes in Networks and Systems 1109, Proceedings of ICTIS 2024 Volume 3, Lecture Notes in Networks and Systems, Springer, Singapore, ISSN 2367-3370, PP 407-417, 29 October 2024 https://doi.org/10.1007/978-981-97-6675-8_33.
143. A. C. Pise, et. al., "Smart Vehicle: A Systematic Review", International Journal - The Ciência & Engenharia - Science & Engineering Journal ISSN: 0103-944XVolume 11 Issue 1, 2023pp: 992–998, 2023.
144. A. C. Pise, et. al., "Smart Vehicle: A Systematic Review", International Journal of Research Publication and Reviews, ISSN 2582-7421, Vol 4, no 10, pp 2728-2731 October 2023.

IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 4, October 2025
Impact Factor: 7.67

145. A. C. Pise, et. al., "Development of BIOBOT System to Assist COVID Patient and Caretakers", European Journal of Molecular and Clinical Medicine ; 10(1):3472-3480, 2023.
146. A. C. Pise, et. al., "IoT Based Landmine Detection Robot", International Journal of Research in Science & EngineeringISSN: 2394-8299Vol: 03, No. 04, June-July 2023.
147. A. C. Pise, et. al., "A Systematic survey on Estimation of Electrical Vehicle", Journal of Electronics, Computer Networking and Applied Mathematics (JECNAM) ISSN: 2799-1156, Volume 3, Issue 01, Pages 1-6, December 2023.
148. A. C. Pise, et. al., "Python Algorithm to Estimate Range of Electrical Vehicle", Web of Science, Vol 21, No 1 (2022) December 2022
149. A. C. Pise, et. al., "Implementation of BIOBOT System for COVID Patient and Caretakers Assistant using IOT", International Journal of Information technology and Computer Engineering. 30-43. 10.55529/ijitc.21.30.43, (2022).
150. A. C. Pise, et. al., "An IoT Based Real Time Monitoring of Agricultural and Micro irrigation system", International journal of scientific research in Engineering and management (IJSREM), VOLUME: 06 ISSUE: 04 | APRIL – 2022, ISSN:2582-3930.
151. A. C. Pise, Dr. K. J. Karande, "An Exploratory study of Cluster Based Routing Protocol in VANET: A Review", International Journal of Advanced Research in Engineering and Technology(IJARET), 12,10, 2021, 17-30, Manuscript ID :00000-94375 Source ID : 00000006, Journal_uploads/ IJARET/VOLUME_12_ISSUE_10/IJARET_12_10_002.pdf
152. A. C. Pise, et. al., "Android based Portable Health Support System," A Peer Referred & Indexed International Journal of Research,Vol.8,issue.4 , April 2019.
153. A. C. Pise, et. al., "Facial Expression Recognition Using Image Processing," International Journal of VLSI Design, Microelectronics and Embedded System,Vol.3,issue.2 , July 2018.
154. A. C. Pise, et. al., "Detection of Cast Iron Composition by Cooling Curve Analysis using Thermocouple Temperature Sensor," UGC Approved International Journal of Academic Science (IJRECE),Vol.6, Issue.3 , July-September 2018.
155. A. C. Pise, et. al., "Android Based Portable Health Support", System International Journal of Engineering Sciences & Research Technology (IJESRT 2017) Vol.6, Issue 8, pp 85-88 5th Aug 2017
156. A. C. Pise, et. al., "Adaptive Noise Cancellation in Speech Signal", International Journal of Innovative Engg and Technology, 2017
157. A. C. Pise, et. al., "Lung Cancer Detection System by using Baysian Classifier", ISSN 2454-7875, IJRPET, published online in conference special issue VESCOMM-2016, February 2016
158. A. C. Pise, et. al.,"Review on Agricultural Plant Diseases Detection by Image Processing", ISSN 2278-62IX, IJLTET, Vol 7, Issue 1 May 2016
159. A. C. Pise, et. al. "Segmentation of Retinal Images for Glaucoma Detection", International Journal of Engineering Research and Technology (06, June-2015).
160. A. C. Pise, et. al. "Color Local Texture Features Based Face Recognition", International Journal of Innovations in Engineering and Technology(IJIET) , Dec. 2014
161. A. C. Pise, et. al. "Single Chip Solution For Multimode Robotic Control", International Journal of Engineering Research and Technology (IJERT-2014), Vol. 3, Issue 12, Dec. 2014.
162. Anjali C. Pise et. al., "Remote monitoring of Greenhouse parameters using zigbee Wireless Sensor Network", International Journal of Engineering Research & Technology ISSN 2278-0181 (online) Vol. 3, Issue 2, and pp: (2412-2414), Feb. 2014.
163. A. C. Pise, K. J. Karande, "Cluster Head Selection Based on ACO In Vehicular Ad-hoc Networks", Machine Learning for Environmental Monitoring in Wireless Sensor Networks
164. A. C. Pise, K. J. Karande, "Architecture, Characteristics, Applications and Challenges in Vehicular Ad Hoc Networks" Presented in 27th IEEE International Symposium on Wireless Personal Multimedia Communications

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165. A. C. Pise, Dr. K. J. Karande, "K-mean Energy Efficient Optimal Cluster Based Routing Protocol in Vehicular Ad Hoc Networks", International Conference on Innovations in Artificial Intelligence and Machine Learning (ICAIML-2022), August 20th and 21st 2022 Springer database Conference.
166. A. C. Pise, Mr. D. Nale, "Web-Based Application for Result Analysis", ", International Conference on Innovations in Artificial Intelligence and Machine Learning (ICAIML-2022), August 20th and 21st 2022 Springer database Conference.
167. A. C. Pise, et. al., "Detection of Cast Iron Composition by Cooling Curve Analysis using Thermocouple Temperature Sensor," 2nd International Conference on Engineering Technology, Science and Management Innovation (ICETSMI – 2018), 2nd September 2018.
168. A. C. Pise, et. al., "Facial Expression Recognition Using Facial Features," IEEE International Conference on Communication and Electronics Systems (ICCES 2018), October 2018.
169. A. C. Pise, et. al., "Estimating Parameters of Cast Iron Composition using Cooling Curve Analysis," IEEE International Conference on Communication and Electronics Systems (ICCES 2018), Coimbatore, October 2018.
170. A. C. Pise, et. al., "Android based portable Health Support System," International Conference on Innovations in Engineering and Technology (CIET 2016), SKN Sinhgad College of Engineering, 30-31 Dec 2016.
171. A. C. Pise, et. al., "Baysian Classifier & FCM Segmentation for Lung Cancer Detection in early stage," International Conference on Innovations in Engineering and Technology (CIET 2016), SKN Sinhgad College of Engineering, 30-31 Dec 2016.
172. A. C. Pise, et. al., "Cast Iron Composition Measurement by Coding Curve Analysis," International Conference on Innovations in Engineering and Technology (CIET 2016), SKN Sinhgad College of Engineering, 30-31 Dec 2016.
173. A. C. Pise, et. al., "War field Intelligence Defence Flaging Vehicle," International Conference on Innovations in Engineering and Technology (CIET 2016), SKN Sinhgad College of Engineering, 30-31 Dec 2016.
174. A. C. Pise, et. al. "Disease Detection of Pomegranate Plant", IEEE sponsored International Conference on Computation of Power, Energy, Information and Communication, 22- 23 Apr. 2015.
175. A. C. Pise, P. Bankar. "Face Recognition by using GABOR and LBP", IEEE International Conference on Communication and Signal Processing, ICCSP, 2-4 Apr. 2015
176. A. C. Pise, et. al. "Single Chip Solution For Multimode Robotic Control", Ist IEEE International Conferene on Computing Communication and Automation, 26-27 Feb2015.
177. Anjali C. Pise, Vaishali S. Katti, "Efficient Design for Monitoring of Greenhouse Parameters using Zigbee Wireless Sensor Network", fifth SARC international conference IRF,IEEE forum ISBN 978-93-84209-21-6,pp 24-26, 25th May 2014
178. A. C. Pise, P. Bankar, "Face Recognition using Color Local Texture Features", International Conference on Electronics and Telecommunication, Electrical and Computer Engineering, Apr.2014.
179. A. C. Pise, et.al. "Monitoring parameters of Greenhouse using Zigbee Wireless Sensor Network", 1st International Conference on Electronics and Telecommunication, Electrical and Computer Engineering, 5-6 Apr.2014.
180. A. C. Pise, et. al. "Compensation schemes and performance Analysis of IQ Imbalances in Direct Conversion Receivers", International Conference at GHPCOE, Gujarat, (Online Proceeding is Available), 2009.
181. A. C. Pise, K. J. Karande, "Energy-Efficient Optimal Routing Protocols in VANETs", 66th Annual IETE Convention, AIC -2023 September16-17, 2023, under the Theme: The Role of 5G In Enabling Digital Transformation for Rural Upliftment.
182. A. C. Pise, et. al. "Automatic Bottle Filling Machine using Raspberry Pi", National Conference on computer ;Communication & information Technology (NCCIT-2018) dated 30th & 31st March 2018.

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183. A. C. Pise, et. al. "Design & Implementation of ALU using VHDL", National Conference on computer ;Communication & information Technology (NCCIT-2018) dated 30th & 31st March 2018.
184. A. C. Pise, et. al. "Mechanism and Control of Autonomus four rotor Quad copter", National Conference on Computer, Electrical and Electronics Engineering, 23- 24 Apr. 2016.
185. A. C. Pise, et. al. "Segmentation of Optic Disk and Optic Cup from retinal Images", ICEECMPE – Chennai, June 2015
186. A. C. Pise, et. al. "Diseases Detection of Pomegranate Plant", IEEE Sponsored International conference on Computation of Power, Energy , April 2015.
187. A. C. Pise, et. al. "Compensation Techniques for I/Q Imbalance in Direct-Conversion Receivers", Conference at SCOE, Pune 2010.
188. A. C. Pise, et. al. "I/Q Imbalance compensation Techniques in Direct Conversion Receiver ", Advancing Trends in Engineering and Management Technologies, ATEMT-2009, Conference at Shri Ramdeobaba Kamla Nehru Engineering College, Nagpur, 20-21 November 2009
189. A. C. Pise, et. al. "Compensation Techniques for I/Q Imbalance in Direct Conversion Receiver", Conference at PICT, Pune 2008.
190. A. C. Pise, et. al. "I/Q Imbalance compensation Techniques in Direct Conversion Receiver ", Conference at DYCOE, Pune 2008.
191. A. C. Pise, et. al. "DUCHA: A New Dual channel MAC protocol for Multihop Ad-Hoc Networks", Conference at SVCP, Pune 2007.
192. Godase, V., Pawar, P., Nagane, S., & Kumbhar, S. (2024). Automatic railway horn system using node MCU. Journal of Control & Instrumentation, 15(1).
193. Godase, V., & Godase, J. (2024). Diet prediction and feature importance of gut microbiome using machine learning. Evolution in Electrical and Electronic Engineering, 5(2), 214-219.
194. Jamadade, V. K., Ghodke, M. G., Katakdhond, S. S., & Godase, V. A Comprehensive Review on Scalable Arduino Radar Platform for Real-time Object Detection and Mapping.
195. Godase, V. (2025). A comprehensive study of revolutionizing EV charging with solar-powered wireless solutions. Advance Research in Power Electronics and Devices e-ISSN, 3048-7145.
196. Godase, V. (2025, April). Advanced Neural Network Models for Optimal Energy Management in Microgrids with Integrated Electric Vehicles. In Proceedings of the International Conference on Trends in Material Science and Inventive Materials (ICTMIM-2025) DVD Part Number: CFP250J1-DVD.
197. Dange, R., Attar, E., Ghodake, P., & Godase, V. (2023). Smart agriculture automation using ESP8266 NodeMCU. J. Electron. Comput. Netw. Appl. Math, (35), 1-9.
198. Godase, V. (2025). Optimized Algorithm for Face Recognition using Deepface and Multi-task Cascaded Convolutional Network (MTCNN). Optimum Science Journal.
199. Mane, V. G. A. L. K., & Gangonda, K. D. S. Pipeline Survey Robot.
200. Godase, V. (2025). Navigating the digital battlefield: An in-depth analysis of cyber-attacks and cybercrime. International Journal of Data Science, Bioinformatics and Cyber Security, 1(1), 16-27.
201. Godase, V., & Jagadale, A. (2019). Three element control using PLC, PID & SCADA interface. International Journal for Scientific Research & Development, 7(2), 1105-1109.
202. Godase, V. (2025). Edge AI for Smart Surveillance: Real-time Human Activity Recognition on Low-power Devices. International Journal of AI and Machine Learning Innovations in Electronics and Communication Technology, 1(1), 29-46.
203. Godase, V., Modi, S., Misal, V., & Kulkarni, S. (2025). LoRaEdge-ESP32 synergy: Revolutionizing farm weather data collection with low-power, long-range IoT. Advance Research in Analog and Digital Communications, 2(2), 1-11.
204. Godase, V. (2025). Comparative study of ladder logic and structured text programming for PLC. Available at SSRN 5383802.

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205. Godase, V., Modi, S., Misal, V., & Kulkarni, S. Real-time object detection for autonomous drone navigation using YOLOv8, ǁ . Advance Research in Communication Engineering and its Innovations, 2(2), 17-27.
206. Godase, V. (2025). Smart energy management in manufacturing plants using PLC and SCADA. Advance Research in Power Electronics and Devices, 2(2), 14-24.
207. Godase, V. (2025). IoT-MCU Integrated Framework for Field Pond Surveillance and Water Resource Optimization. International Journal of Emerging IoT Technologies in Smart Electronics and Communication, 1(1), 9-19.
208. Godase, V. (2025). Graphene-Based Nano-Antennas for Terahertz Communication. International Journal of Digital Electronics and Microprocessor Technology, 1(2), 1-14.
209. Godase, V., Khiste, R., & Palimkar, V. (2025). AI-Optimized Reconfigurable Antennas for 6G Communication Systems. Journal of RF and Microwave Communication Technologies, 2(3), 1-12.
210. Bhaganagare, S., Chavan, S., Gavali, S., & Godase, V. V. (2025). Voice-Controlled Home Automation with ESP32: A Systematic Review of IoT-Based Solutions. Journal of Microprocessor and Microcontroller Research, 2(3), 1-13.
211. Jamadade, V. K., Ghodke, M. G., Katakdhond, S. S., & Godase, V. A Comprehensive Review on Scalable Arduino Radar Platform for Real-time Object Detection and Mapping.
212. Godase, V. (2025). Cross-Domain Comparative Analysis of Microwave Imaging Systems for Medical Diagnostics and Industrial Testing. Journal of Microwave Engineering & Technologies, 12(2), 39-48p.
213. V. K. Jamadade, M. G. Ghodke, S. S. Katakdhond, and V. Godase, ―A Review on Real-time Substation Feeder Power Line Monitoring and Auditing Systems," International Journal of Emerging IoT Technologies in Smart Electronics and Communication, vol. 1, no. 2, pp. 1-16, Sep. 2025.
214. V. V. Godase, "VLSI-Integrated Energy Harvesting Architectures for Battery-Free IoT Edge Systems,"Journal of Electronics Design and Technology, vol. 2, no. 3, pp. 1-12, Sep. 2025.
215. A. Salunkhe et al., "A Review on Real-Time RFID-Based Smart Attendance Systems for Efficient Record Management," Advance Research in Analog and Digital Communications, vol. 2, no. 2, pp.32-46, Aug. 2025.
216. Vaibhav, V. G. (2025). A Neuromorphic-Inspired, Low-Power VLSI Architecture for Edge AI in IoT Sensor Nodes. Journal of Microelectronics and Solid State Devices, 12(2), 41-47p.
217. Nagane, M.S., Pawar, M.P., & Godase, P.V. (2022). Cinematica Sentiment Analysis. Journal of Image Processing and Intelligent Remote Sensing.
218. Godase, V.V. (2025). Tools of Research. SSRN Electronic Journal.
219. Godase, V. (n.d.). EDUCATION AS EMPOWERMENT: THE KEY TO WOMEN'S SOCIO ECONOMIC DEVELOPMENT. Women Empowerment and Development, 174–179.
220. Godase, V. (n.d.). COMPREHENSIVE REVIEW ON EXPLAINABLE AI TO ADDRESSES THE BLACK BOX CHALLENGE AND ITS ROLE IN TRUSTWORTHY SYSTEMS. In Sinhgad College of Engineering, Artificial Intelligence Education and Innovation (pp. 127–132).
221. Godase, V. (n.d.-b). REVOLUTIONIZING HEALTHCARE DELIVERY WITH AI-POWERED DIAGNOSTICS: A COMPREHENSIVE REVIEW. In SKN Sinhgad College of Engineering, SKN Sinhgad College of Engineering (pp. 58–61).
222. Dhope, V. (2024). SMART PLANT MONITORING SYSTEM. In International Journal of Creative Research Thoughts (IJCRT). https://www.ijcrt.org
223. M. M. Zade,Sushant D.Kambale,Shweta A.Mane,Prathamesh M. Jadhav.(2025) "IOT Based early fire detection in Jungles". RIGJA&AR Volume 2 Issue 1,ISSN:2998-4459. DOI:https://doi.org/10.5281/zendo.15056435
224. M. M. Zade, Bramhadev B. Rupanar, Vrushal S. Shilawant , Akansha R. Pawar(2025) "IOT Flood Monitoring & Alerting System using Rasberry Pi-Pico "International Journal of Research Publication & Reviews , Volume 6 ,Issue 3,ISSN:2582-7421.DOI:https://ijrpr.com/uploads/V6ISSUE3/IJRPR40251.pdf

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225. M.M.Zade(2022) "Touchless Fingerprint Recognition System"(Paper-ID 907)(2022) International Conference on "Advanced Technologies for Societal Applications: Techno-Societal 2022 https://link.springer.com/book/10.1007/978-3-031-34644-6?page=6
226. Mr.M.M.Zade published the paper on "Automation of Color Object Sorting Conveyor Belt", in International Journal of Scientific Research in Engineering & Management (IJSREM),ISSN:2582-3930 Volume 06 ,Issue 11th November 2022.
227. Mr.M.M.Zade published the paper on "Cloud Based Patient Health Record Tracking web Developement",in International Journal of Advanced Research in Science, Communication & Technology(IJARSCT),ISSN NO:2581-9429 Volume 02 ,Issue 03,DOI 1048175/IJARSCT-3705,IF 6.252, May 2022.
228. Mr. Mahesh M Zade, "Performance analysis of PSNR Vs. Impulse Noise for the enhancement of Image using SMF", Journal of Applied Science & Computations (JASC UGC Approved), Volume VI, Issue II, Feb.2019
229. Mr. Mahesh M Zade, "Classification of Power Quality Disturbances Using SVM & their Efficiency Comparison", Journal of Applied Science & Computations (JASC UGC Approved), Volume VI, Issue II, Feb.2019
230. Mr. Mahesh M Zade, "Dynamic Clustering of Wireless Sensor Network Using Modified AODV", Journal of Applied Science & Computations (JASC UGC Approved), Volume VI, Issue II, Feb.2019
231. Mr. Mahesh M Zade, "Performance analysis of PSNR Vs. Impulse Noise for the enhancement of Image using SMF", National Conference on Mathematical Modeling and Computational Intelligence 2K19 (MMCI-2k19), in association with JASC, at S. B. Patil College of Engineering, Indapur, Feb.2019
232. Mr. Mahesh M Zade, "Classification of Power Quality Disturbances Using SVM & their Efficiency Comparison", National Conference on Mathematical Modeling and Computational Intelligence 2K19 (MMCI-2k19), in association with JASC, at S. B. Patil College of Engineering, Indapur Feb.2019
233. Mr. Mahesh M Zade, "Dynamic Clustering of Wireless Sensor Network Using Modified AODV", National Conference on Mathematical Modeling and Computational Intelligence 2K19 (MMCI-2k19), in association with JASC, at S. B. Patil College of Engineering, Indapur Feb.2019
234. Mr. Mahesh M Zade & Mr.S.M.Karve,"Performance Analysis of Median Filter for Enhancement of Highly Corrupted Images", National Conference on Advanced Trends in Engineering, Association with IRJMS, Karmyogi Engineering College, Shelave, Pandharpur, March 2016.
235. Mr. Mahesh M Zade & Mr.S.M.Karve,"Implementation of Reed Solomen Encoder & Decoder Using FPGA",National Conference on Advanced Trends in Engineering, Association with IRJMS, Karmyogi Engineering College, Shelave, Pandharpur, March 2016.
236. Mr. Mahesh M Zade & Dr.S.M.Mukane,"Performance of Switching Median Filter for Enhancement of Image", National Conference on Mechatronics at Sinhgad Institute of Technology and Science, Narhe, Pune, Feb. 2016.
237. Mr. Mahesh M Zade & Dr.S.M.Mukane,"Enhancement of Image with the help of Switching Median Filter", National Conference on Emerging Trends in Electronics & Telecommunication Engineering, SVERI's College of Engineering Pandharpur, NCET 2013.
238. Mr.Mahesh M Zade & Dr.S.M.Mukane,"Enhancement of Image with the help of Switching Median Filter", International Journal of Computer Application (IJCA) SVERI's College of Engineering, Pandharpur, Dec.2013.