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, May 2025
Impact Factor: 7.67

IoT Based Flood Monitoring System by using Thing Speak Cloud

Avinash. A. Suryagan[1], Arti L Nemte[1], Kirti D Thorat[1], Suhas B Khadake[1]
SVERI's College of Engineering, Pandharpur, Maharashtra, India[1]

Abstract: *In recent years, flooding has become a major problem, encountered in many places all over the world, causing damage to property ranging from human life to economic losses. Floods cannot be prevented and eliminated, but the catastrophic damage caused by them can be mitigated. Floods can be predicted in advance with the help of emerging technologies, such as the Internet of Things (IoT). Using such technologies, the people can be warned in advance and evacuated from affected areas to safe places, along with their valuable possessions. In this context, a real-time application is required that can provide an early flood warning based on the seam less data received from IoT devices about various parameters. In this work, we have developed an IoT-based prototype to collect hydrological data of rivers, such as water flow, water level, and water discharge. The proposed system is also able to collect meteorological data, such as temperature, humidity, wind speed, and wind direction. Furthermore, the collected data have been analyses and classified by using the long short-term memory (LSTM) model with water discharge.*

Keywords: Flood Management

I. INTRODUCTION

Flooding is one of the most significant problems encountered in many places all over the world. Flood occurs when the water source increases excessively, as in case of the melting of snow. The water level in rivers rises, causing floods and affecting many areas in a bad way. These disasters cannot be eliminated, but the catastrophic damage caused by them can be alleviated. The key method for reducing the impact of disasters is called disaster management[1-25]. Disaster management, either structural or non-structural, is necessary to protect human life and property from natural disasters. It includes a thorough assessment of the damage caused by disasters, restoration of communication channels, transportation and rescue, water intake, and restoration of electric power to the affected areas. One of the key solutions in the context of non-structural methods of disaster management is to warn the people before the disaster strikes. Accordingly, strategies for rescue work are also planned. The state of Uttarakhand, located in the north of India, has not remained untouched by the effects of the natural disasters [26-100]. This Himalayan region, with its unique geological formations, environmental, and climatic variations, is often prone to natural disasters, specifically flood, landslides, and earthquakes. In 2013, floods in Kedarnath, Uttarakhand, caused terrible destruction with a death toll of more than 6000 people. Flood disasters have had a very adverse effect on the life of the people of Uttarakhand in the last few decades[101-200]. Moderate or torrential rains from mid-June to September (i.e., monsoon) come as a problem for the people here[201-257]. The life of the people of this hill state gets completely disturbed due to floods, and people often lose their lives along with their houses, agricultural land, and public properties, such as roads, bridges, and school buildings getting damaged. Damage due to floods can be prevented if proper measures are taken. It is necessary to identify the areas affected by floods, so that proper arrangements can be made.

II. RELATED WORK

The application areas of the Internet of Things (IoT), sensing, analysis, and modelling of flash flood have been discussed in some of the recent works. Hart and Martinez discussed how IoT can take at traditional wireless sensor network (WSN) to connect the world of things, which can provide seamless connections between a variety of devices. Ullo and Sinha aimed to accomplish a review on smart environmental monitoring that involves air quality, water

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, May 2025
Impact Factor: 7.67

quality, radiation pollution, and agriculture systems. Sandro et all present an efficient digitization process for improvements and effective use of limited resources, process, and system by using IoT-supported smart technologies. Mangu and Li proposed a low-cost and high-speed data collection system across hard-to-reach areas by using IoT-enabled drone, based on 5 GHz and long range (LoRa) technology. To address the challenges, such as cost, time consumption, and power consumption of air quality monitoring stations, Jalpa and Mishra proposed the IoT enabled environment monitoring system. In, a river flood monitoring, modelling, and forecasting approach by analysing the river physical processes based on data crowd sourcing, river terrain digital maps, input data clustering and filtering, and so on has been introduced. Shi-Wei et al. proposed an image-based monitoring system for flood occurrence and analysis of water-level changes. They have used a camera for visual sensing of river water level. Mustafa et al. have introduced a sensing system based on ultrasonic range finder and passive infrared (PIR) sensors that can continuously monitor water level and remote temperature, respectively. A combination of artificial neural network (ANN) and L1-regularized reconstruction is used to process measurement data. Prachetas et al. proposed a model to collect the data by using WSN network, which has been implemented by using a modified mesh network over ZigBee, and to send the data over the Internet, a general packet radio service (GPRS) module is used. Gustavo et al. have developed a fault tolerant embedded system to detect and forecast the occurrence of flood based on WSN, IoT, and machine learning (ML) named as SENDI and evaluated on ns-3. Jayashree et al explored different types of flood forecasting systems and proposed a flood warning system, which overcomes the issues associated with all of the reviewed systems. Kun et al. perform flood detection by using IoT and send alert messages to the end user, which has the information of water-level condition and water flow with time. Shah et al. proposed a flood alert system, which can measure the river water level and the rising speed of water level, so that an earlier notification can be sent through short message service (SMS).

Research Gaps: The state-of-the-art studies are lacking in the investigation of monitoring and analysis of hydrological and meteorological parameters. There are few studies to indicate the most suitable, low cost and power efficient sensors, microcontroller boards, communication modules, and cloud architectures to be utilized in building a prototype for sensing and analysis of environmental parameters. There are a plenty of flood monitoring facilities in metropolitan areas, but no such facilities for the population living in the adjoining areas, along the river banks, in the hills. Few works have discussed calibration, outlier detection, and noise reduction methods for the preprocessing of the sensed data. Research work has not been carried out to explore the portability, scalability, and reliability of sensing devices. This is the motivation to develop a comprehensive, low-cost, energy efficient, mobile sensing system based on IoT technology to monitor and forecast flash flood events and related parameters.

III. ARCHITECTURE OF THE PROPOSED IOT SYSTEM

The diagram illustrates a system for flood monitoring and data logging using various electronic components. The system uses an ESP8266 microcontroller to manage the process. It measures the distance using an ultrasonic sensor and the temperature and humidity with a DHT11 sensor. The measured distance is compared to a threshold to determine if a flood is occurring. If the distance is less than the threshold, it indicates a flood, and the system sends an alert to the cloud. Otherwise, it indicates a safe condition and sends a corresponding message to the cloud. The temperature and humidity values are displayed on an OLED screen and sent to Thing Speak for data logging and visualization as graphs.

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, May 2025
Impact Factor: 7.67

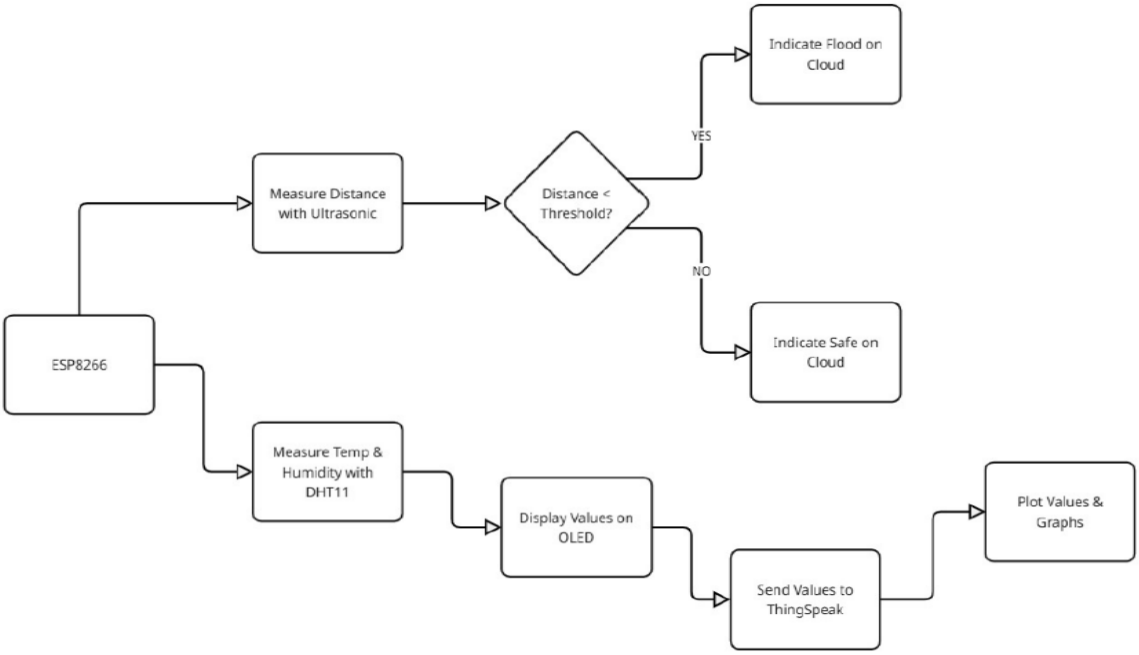


Figure-1 Block diagram of IOT based flood monitoring and alerting system

Description of Block Diagram:-

1. ESP8266 Microcontroller

The ESP8266 is at the core of this system. It controls the sensors, handles data processing, displays output, and transmits data to the cloud.

2. Measure Distance with Ultrasonic Sensor

The ESP8266 triggers the ultrasonic sensor (e.g., HC-SR04) to measure the distance from a reference point (like a bridge or elevated platform) to the water surface.

This distance indicates the water level. A shorter distance means higher water level, which could indicate flooding.

3. Check Distance < Threshold?

The measured distance is compared to a predefined threshold.

If distance < threshold:

This indicates that the water level has risen to a potentially dangerous level (flooding).

If distance ≥ threshold:

The situation is considered safe.

4. Indicate Status on Cloud

If flood detected:

The system sends an alert to the cloud (e.g., through Thing Speak or another IoT platform), indicating a flood condition.

If safe:

The system sends a "safe" status to the cloud.

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, May 2025
Impact Factor: 7.67

5. Measure Temperature & Humidity with DHT11

The ESP8266 also connects to a DHT11 sensor to measure:
Temperature
Humidity
These environmental readings can be useful for additional context or correlations with flooding.

6. Display Values on OLED

The measured temperature, humidity, and possibly distance/water level are displayed on an OLED screen in real time.
This provides local, real-time feedback without needing to access the cloud.

7. Send Values to Thing Speak

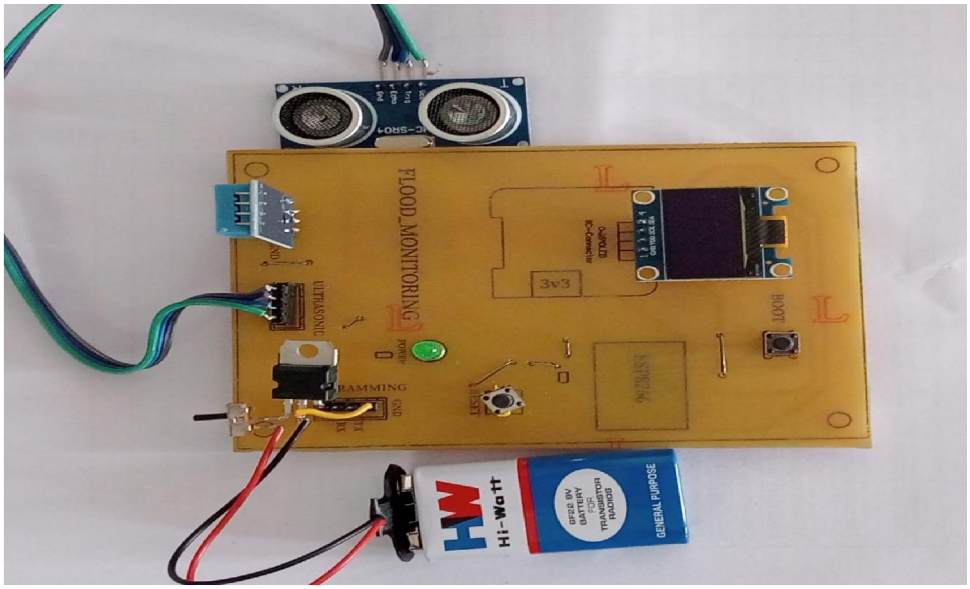
All sensor data (distance, temperature, humidity) is uploaded to the cloud, specifically to Thing Speak, a popular IoT platform.
This allows for remote monitoring and logging.

8. Plot Values & Graphs

On Thing Speak, the uploaded data is plotted into charts and graphs.
This helps in:
Visualizing trends (e.g., rising water levels over time)
Analysing historical data
Predicting future events

IV. EXPERIMENTAL SET-UP

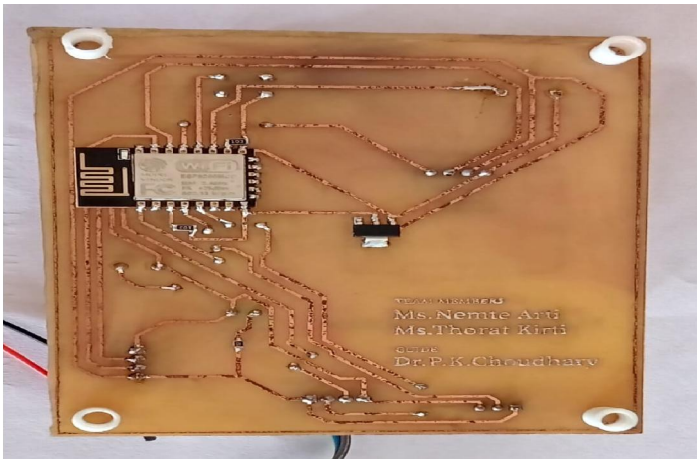
Water discharge, water level, rainfall, and temperature are the parameters used in flood modelling. The hydrological parameters are used to check the variation in the river conditions, whereas the meteorological parameters are used to examine variations in weather conditions at a certain geo-location. The system operates by deploying sensor node to capture both hydrological and meteorological data, as illustrated in Fig The measured parameters are used as inputs to the LSTM model. The proposed system uses.



DOI: 10.48175/IJARSCT-26480

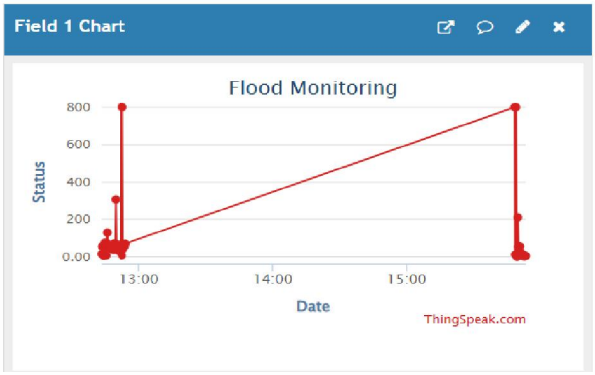
IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 4, May 2025
Impact Factor: 7.67

water discharge, water level, rainfall, and temperature as input parameters. Water discharge is computed using the water flow. The LSTM algorithm is used to identify flood occurrences at any particular moment, using water discharge, water level, rainfall, and temperature as inputs. It classifies the flood events into four categories model gets test observations from the sensor unit and decides flood occurrences based on LSTM analysis. In LSTM, the cells add long-term memory in an even more proficient way by allowing for the learning of additional parameters. This makes it the most powerful neural network for predicting, particularly when our data have a longer-term trend. LSTM algorithm has a significant advantage over other ML algorithms.



V. RESULTS

The graph depicts flood monitoring data over time, showing the status of a field. The horizontal axis represents the date, spanning from 13:00 to 15:00, while the vertical axis indicates the status, ranging from 0 to 800. There are two significant spikes in the data, one at the beginning around 12:50 and another at the end around 15:10, both reaching a status level of 800. These spikes could indicate instances of flooding or high-water levels. Between these spikes, the status gradually increases from a low point near 0 to around 800, suggesting a period of rising water levels or a gradual increase in the monitored parameter. The graph also shows several smaller fluctuations around the 13:00 mark, indicating some variability in the status during that time. The data is labeled as "Field 1 Chart," suggesting that it tracks water levels or related parameters in a specific field.

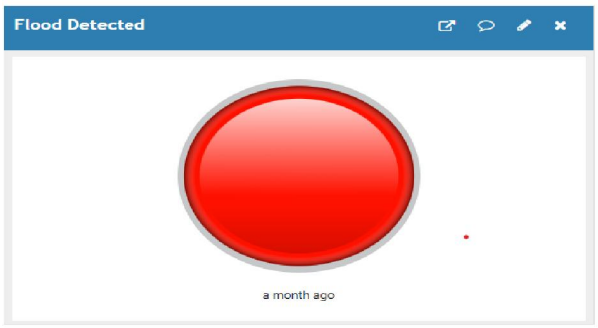


[Fig- Flood Monitoring]

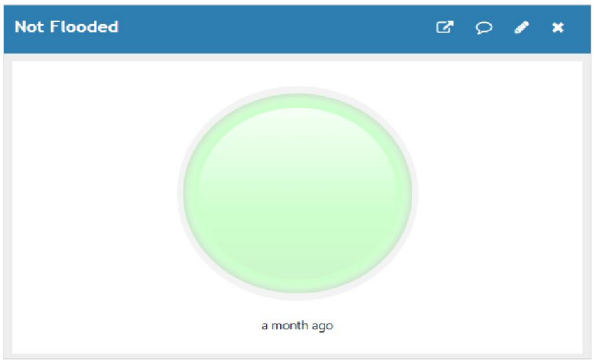
The below image shows a notification interface with the text "Flood Detected" at the top left and "a month ago" at the bottom center. The main element is a large, solid red circle, reminiscent of a warning light, centered on a white background. There are also a few interface icons at the top right, including what appears to be a save icon, a chat bubble, a pencil icon, and an "X" icon, likely for closing the notification. A small red dot is visible on the right side of

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, May 2025
Impact Factor: 7.67

the screen, near the bottom. The overall design suggests a system alert or notification related to a flood event that occurred a month prior.

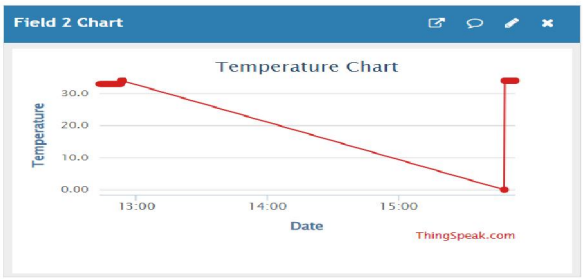


[Fig-Flood detected]



[Fig- Not flood detect]

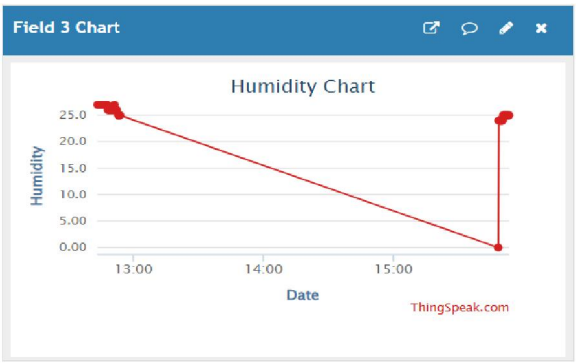
The below image shows a temperature chart, labeled "Field 2 Chart," displaying temperature readings over time. The chart plots temperature on the y-axis, ranging from 0 to 30 degrees, and time on the x-axis, spanning from 13:00 to 15:00. The data is represented by a red line, which initially shows a temperature of approximately 32 degrees at 13:00.



[Fig- Temperature chart]

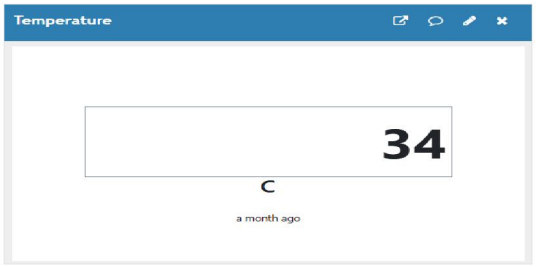
The below image shows a line chart titled "Humidity Chart," displaying humidity levels over time. The x-axis represents the date, labelled with times 13:00, 14:00, and 15:00. The y-axis represents humidity, with values ranging from 0.00 to 25.0. The chart indicates a decrease in humidity from approximately 26.0 at 13:00 to nearly 0.00 around 15:15, followed by a sharp increase back to around 24.0 at approximately 15:20. The data points are connected by a red line, visually representing the change in humidity over the measured period. The chart also includes the label "ThingSpeak.com" at the bottom right.

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, May 2025
Impact Factor: 7.67



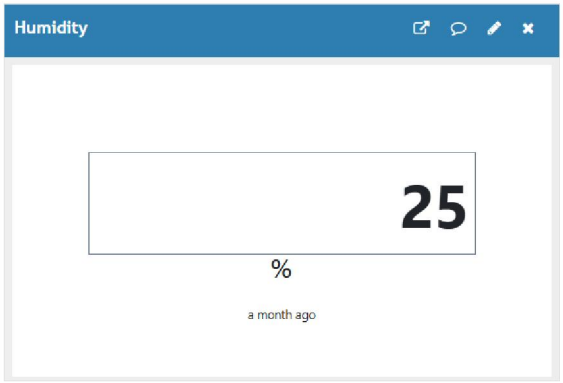
[Fig- Humidity chart]

The below image displays a temperature reading of 34 degrees Celsius, recorded a month ago. It is presented in a simple, digital format, resembling a dashboard or display panel. The number "34" is prominently featured to the right of a rectangular space, possibly indicating where a previous temperature reading or other data might have been displayed. Below the number, the unit "C" denotes Celsius. Underneath, the text "a month ago" indicates the timestamp of the measurement. The overall design is clean and minimalist, with a blue header labeled "Temperature" and a white background, suggesting it could be a screenshot from a weather app, a home automation interface, or a similar data monitoring system.



[Fig- Temperature display]

The below image shows a dashboard widget displaying humidity information. The widget indicates a humidity level of 25% measured a month ago. The word "Humidity" is at the top left of the widget, and there are several icons at the top right, possibly for actions like sharing, commenting, or editing. The main content area displays "25" in large font, followed by the percent sign "%" below it, and the text "a month ago" underneath. This suggests that the humidity reading is from a past measurement rather than the current real-time value.



[Fig-Humidity display]

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, May 2025
Impact Factor: 7.67

VI. CONCLUSION

The project IoT based Flood monitoring and Alerting System is used for measuring the water level using the sensors and send the alert messages through the Web or internet applications through Blynk we send SMS alert and E-Mail alert. This system can be into two sensing test of sensor test, GSM Test within the microcontroller (Arduino). Here the ultrasonic sensor senses the water level near the river beds and when water reaches the threshold level it sends a0lert or warning messages to the concerned authorities and the residences. Here in this project the ultrasonic sensor is connected to the Arduino and GSM to control the water level in the water nearby rivers.

REFERENCES

[1]. Sabre, Mohamad Syafiq Mohd, Shahram Shah Abdullah, and Amul Faruq. "Flood warning and monitoring system utilizing internet of things technology." Kinetic: Game Technology, Information System, Computer Network, Computing, Electronics, and Control (2019): 287-296.

[2]. Darian, Agus, Unuk Darussalam, and Novi Dian Natasha. "Water Level Monitoring and Flood Early Warning Using Microcontroller with IoT Based Ultrasonic Sensor." Journal Teknik Informatic CIT Medico 11.1 (2019): 22-28.

[3]. Hadi, M. I., et al. "Designing early warning flood detection and monitoring system via IoT." IOP Conference Series: Earth and Environmental Science. Vol. 479. No. 1. IOP Publishing, 2020.

[4]. Lai, T. W., Oo, Z. L., & Moe, A. (2019). Real time water level monitoring for early warning system of flash floods using Internet of Things (IoT). In 2019 Joint International Conference on Science, Technology, and Innovation, 16th September, Mandalay, Myanmar (pp. 1-6).

[5]. Shankar, B. Maruthi, et al. "Internet of things based smart flood forecasting and early warning system." 2021 5th International Conference on Computing Methodologies and Communication (ICCMC). IEEE, 2021.

[6]. Nugroho, Dwi Novian to. "Flood Notification System Using Nodemcu with Telegram Monitoring." INAJEEE (Indonesian Journal of Electrical and Electronics Engineering) 6.1 (2023): 9-12.

[7]. Sophia, S. "Flood alerting system through water level meter." International Research Journal of Engineering and Technology (IRJET) 5.03 (2018): 1123-1128.

[8]. Kusumodestoni, R. Hadapiningradja, et al. "Internet of Things Innovation for Flood Detection: Monitoring Water Level, Temperature, and Humidity with Node MCU and Telegram Bot." Journal of Computational Analysis and Applications (Jokai) 33.05 (2024): 850-859.

[9]. Noar, Nor Anum Zu Raimi Md, and Mahanian Md Kamal. "The development of smart flood monitoring system using ultrasonic sensor with blank applications." In 2017 IEEE 4th international conference on smart instrumentation, measurement and application (ICSIMA), pp. 1-6. IEEE, 2017.

[10]. https://www.ijitee.org/wp-content/uploads/papers/v9i6/F3854049620.pdf

[11]. H. Hamidon, "Flood level indicator and risk warning system for remote location monitoring flood observatory system", WSEAS Trans. Syst. Control, vol. 5, no.3, pp. 153-163,2010

[12]. Gyusoo Kim and Seulgi Lee, "2014 Payment Research", Bank of Korea, Vol. 2015, No. 1, Jan. 2015.

[13]. A.M. Leman, K.A. Rahman, M.N.M. Salleh, I. Baba, D. Feriyanto, L.S.C. Johnson, and S.N Hidayah M., "A review of flood catastrophic management in Malaysia, vol.11, no. 14, Jul 2016.

[14]. W, Lo, J.H. WF.P. Lin, and C. H. Hsu, "Cyber surveillance for flood disaster," sensors (Switzerland),2015.

[15]. Qing gong Ma, et al., "Application of Internet of Things in Urban Flooding Prevention Management system", Advances in Internet of Things, 7,1-9,2017.

[16]. U.s. De, et al., "Urban flooding in recent decades in four megacities of India", J. Ind. Geophys Union, Vol.17, No.2, pp. 153-165, 2013.

[17]. Z. M. Taib, N. S. Jaharuddin, and Z. D. Mansor, "A review of flood disaster and disaster management in Malaysia," International Journal of Accounting & Business Management, vol. 4, no. 3, 2016.

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, May 2025
Impact Factor: 7.67

[18]. Arabinda Nanda, Omkar Pattanaik, Biswajita Mohanty, "Wireless Sensor Network for Prediction of Tides using Mamdani Fuzzy Inference System", in International Journal of Coms putter Information Systems (ISSN 2229 5208) Volume 1, Number 2, September 2010.

[19]. H. Kung. J. Hua and C. Chen. "Draught forecast model and framework" using wireless sensor network, Journal of Information Science and Engineering vo. 22, 2006pp. 751-769.

[20]. Altaf O. Mulani, Arti Vasant Bang, Ganesh B. Birajadar, Amar B. Deshmukh, and Hemlata Makarand Jadhav, (2024). IoT Based Air, Water, and Soil Monitoring System for Pomegranate Farming, Annals of Agri-Bio Research. 29 (2): 71-86, 2024.

[21]. Bhawana Parihar, Ajmeera Kiran, Sabitha Valaboju, Syed Zahidur Rashid, and Anita Sofia Liz D R. (2025). Enhancing Data Security in Distributed Systems Using Homomorphic Encryption and Secure Computation Techniques, ITM Web Conf., 76 (2025) 02010

[22]. DOI: https://doi.org/10.1051/itmconf/20257602010

[23]. C. Veena, M. Sridevi, K. K. S. Liyakat, B. Saha, S. R. Reddy and N. Shirisha,(2023). HEECCNB: An Efficient IoT-Cloud Architecture for Secure Patient Data Transmission and Accurate Disease Prediction in Healthcare Systems, 2023 Seventh International Conference on Image Information Processing (ICIIP), Solan, India, 2023, pp. 407-410, doi: 10.1109/ICIIP61524.2023.10537627. Available at: https://ieeexplore.ieee.org/document/10537627

[24]. D. A. Tamboli, V. A. Sawant, M. H. M. and S. Sathe, (2024). AI-Driven-IoT(AIIoT) Based Decision-Making- KSK Approach in Drones for Climate Change Study, 2024 4th International Conference on Ubiquitous Computing and Intelligent Information Systems (ICUIS), Gobichettipalayam, India, 2024, pp. 1735-1744, doi: 10.1109/ICUIS64676.2024.10866450.

[25]. K. Rajendra Prasad, Santoshachandra Rao Karanam et al. (2024). AI in public-private partnership for IT infrastructure development, Journal of High Technology Management Research, Volume 35, Issue 1, May 2024, 100496. https://doi.org/10.1016/j.hitech.2024.100496

[26]. K. K. S. Liyakat. (2023).Detecting Malicious Nodes in IoT Networks Using Machine Learning and Artificial Neural Networks, 2023 International Conference on Emerging Smart Computing and Informatics (ESCI), Pune, India, 2023, pp. 1-5, doi:10.1109/ESCI56872.2023.10099544. Available at: https://ieeexplore.ieee.org/document/10099544/

[27]. K. Kasat, N. Shaikh, V. K. Rayabharapu, and M. Nayak. (2023). Implementation and Recognition of Waste Management System with Mobility Solution in Smart Cities using Internet of Things, 2023 Second International Conference on Augmented Intelligence and Sustainable Systems (ICAISS), Trichy, India, 2023, pp. 1661-1665, doi: 10.1109/ICAISS58487.2023.10250690 . Available at: https://ieeexplore.ieee.org/document/10250690/

[28]. Kazi, K. (2024a). AI-Driven IoT (AIIoT) in Healthcare Monitoring. In T. Nguyen & N. Vo (Eds.), Using Traditional Design Methods to Enhance AI-Driven Decision Making (pp. 77-101). IGI Global. https://doi.org/10.4018/979-8-3693-0639-0.ch003 available at: https://www.igi-global.com/chapter/ai-driven-iot-aiiot-in-healthcare-monitoring/336693

[29]. Kazi, K. (2024b). Modelling and Simulation of Electric Vehicle for Performance Analysis: BEV and HEV Electrical Vehicle Implementation Using Simulink for E-Mobility Ecosystems. In L. D., N. Nagpal, N. Kassarwani, V. Varthanan G., & P. Siano (Eds.), E-Mobility in Electrical Energy Systems for Sustainability (pp. 295-320). IGI Global.https://doi.org/10.4018/979-8-3693-2611-4.ch014 Available at: https://www.igi-global.com/gateway/chapter/full-text-pdf/341172

[30]. Kazi, K. (2025). Machine Learning-Powered IoT (MLIoT) for Retail Apparel Industry. In T. Tarnanidis, E. Papachristou, M. Karypidis, & V. Manda (Eds.), Sustainable Practices in the Fashion and Retail Industry (pp. 345-372). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-9959-0.ch015

[31]. Kazi, K. S. (2025). Braille-Lippi Numbers and Characters Detection and Announcement System for Blind Children Using KSK Approach: AI-Driven Decision-Making Approach. In T. Murugan, K. P., & A.

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, May 2025
Impact Factor: 7.67

Abirami (Eds.), Driving Quality Education Through AI and Data Science (pp. 531-556). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-8292-9.ch023

[32]. Kazi, K. S. (2025). AI-Driven IoT (AIIoT)-Based Decision-Making System for High BP Patient Healthcare Monitoring: KSK1 Approach for BP Patient Healthcare Monitoring. In T. Mzili, A. Arya, D. Pamucar, & M. Shaheen (Eds.), Optimization, Machine Learning, and Fuzzy Logic: Theory, Algorithms, and Applications (pp. 71-102). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-7352-1.ch003

[33]. Kazi, K. S. (2025a). Advancing Towards Sustainable Energy With Hydrogen Solutions: Adaptation and Challenges. In F. Özsungur, M. Chaychi Semsari, & H. Küçük Bayraktar (Eds.), Geopolitical Landscapes of Renewable Energy and Urban Growth (pp. 357-394). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-8814-3.ch013

[34]. Kazi, S. (2024). Machine Learning-Based Pomegranate Disease Detection and Treatment. In M. Zia Ul Haq & I. Ali (Eds.), Revolutionizing Pest Management for Sustainable Agriculture (pp. 469-498). IGI Global. https://doi.org/10.4018/979-8-3693-3061-6.ch019

[35]. Kazi, S. (2024a). Computer-Aided Diagnosis in Ophthalmology: A Technical Review of Deep Learning Applications. In M. Garcia & R. de Almeida (Eds.), Transformative Approaches to Patient Literacy and Healthcare Innovation (pp. 112-135). IGI Global. https://doi.org/10.4018/979-8-3693-3661-8.ch006 Available at: https://www.igi-global.com/chapter/computer-aided-diagnosis-in-ophthalmology/342823

[36]. Kazi, S. (2024b). IoT Driven by Machine Learning (MLIoT) for the Retail Apparel Sector. In T. Tarnanidis, E. Papachristou, M. Karypidis, & V. Ismyrlis (Eds.), Driving Green Marketing in Fashion and Retail (pp. 63-81). IGI Global. https://doi.org/10.4018/979-8-3693-3049-4.ch004

[37]. Kazi, S. (2025c). AI-Driven-IoT (AIIoT)-Based Decision Making in Drones for Climate Change: KSK Approach. In S. Aouadni& I. Aouadni (Eds.), Recent Theories and Applications for Multi-Criteria Decision-Making (pp. 311-340). IGI Global. https://doi.org/10.4018/979-8-3693-6502-1.ch011

[38]. Kazi, S. (2024d). Artificial Intelligence (AI)-Driven IoT (AIIoT)-Based Agriculture Automation. In S. Satapathy & K. Muduli (Eds.), Advanced Computational Methods for Agri-Business Sustainability (pp. 72-94). IGI Global. https://doi.org/10.4018/979-8-3693-3583-3.ch005

[39]. Kazi, S. (2025). Machine Learning-Driven Internet of Medical Things (ML-IoMT)-Based Healthcare Monitoring System. In B. Soufiene & C. Chakraborty (Eds.), Responsible AI for Digital Health and Medical Analytics (pp. 49-86). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-6294-5.ch003

[40]. Kazi, S. (2025a). Transformation of Agriculture Effectuated by Artificial Intelligence-Driven Internet of Things (AIIoT). In J. Garwi, M. Dzingirai, & R. Masengu (Eds.), Integrating Agriculture, Green Marketing Strategies, and Artificial Intelligence (pp. 449-484). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-6468-0.ch015

[41]. K S K, (2024c). Vehicle Health Monitoring System (VHMS) by Employing IoT and Sensors, Grenze International Journal of Engineering and Technology,Vol 10, Issue 2, pp- 5367-5374. Available at: https://thegrenze.com/index.php?display=page&view=journalabstract&absid=3371&id=8

[42]. K S K, (2024e). A Novel Approach on ML based Palmistry, Grenze International Journal of Engineering and Technology,Vol 10, Issue 2, pp- 5186-5193. Available at: https://thegrenze.com/index.php?display=page&view=journalabstract&absid=3344&id=8

[43]. K S K, (2024f).IoT based Boiler Health Monitoring for Sugar Industries, Grenze International Journal of Engineering and Technology,Vol 10, Issue 2, pp. 5178 -5185. Available at: https://thegrenze.com/index.php?display=page&view=journalabstract&absid=3343&id=8

[44]. Keerthana, R., K, V., Bhagyalakshmi, K., Papinaidu, M., V, V., & Liyakat, K. K. S. (2025). Machine learning based risk assessment for financial management in big data IoT credit. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.5086671

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, May 2025
Impact Factor: 7.67

[45]. Kazi, K. S. (2025d). AI-Driven-IoT (AIIoT)-Based Jawar Leaf Disease Detection: KSK Approach for Jawar Disease Detection. In U. Bhatti, M. Aamir, Y. Gulzar, & S. Ullah Bazai (Eds.), Modern Intelligent Techniques for Image Processing (pp. 439-472). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-9045-0.ch019

[46]. Kazi, K. S. (2025e). AI-Powered-IoT (AIIoT)-Based Decision-Making System for BP-Patient Healthcare Monitoring: BP-Patient Health Monitoring Using KSK Approach. In M. Lytras & S. Alajlan (Eds.), Transforming Pharmaceutical Research With Artificial Intelligence (pp. 189-218). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-6270-9.ch007

[47]. Kazi, K. S. (2025f). A Study on AI-Driven Internet of Battlefield Things (IoBT)-Based Decision Making: KSK Approach in IoBT. In M. Tariq (Ed.), Merging Artificial Intelligence With the Internet of Things (pp. 203-238). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-8547-0.ch007

[48]. Kazi, K. S. (2025g). KK Approach to Increase Resilience in Internet of Things: A T-Cell Security Concept. In M. Almaiah & S. Salloum (Eds.), Cryptography, Biometrics, and Anonymity in Cybersecurity Management (pp. 199-228). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-8014-7.ch010

[49]. Kutubuddin Kazi (2024). Explainable AI in Healthcare. In: Explainable Artificial Intelligence in healthcare System, editors: A. Anitha Kamaraj, Debi Prasanna Acharjya. ISBN: 979-8-89113-598-7. DOI: https://doi.org/10.52305/GOMR8163

[50]. Kutubuddin Kazi, (2024a). Machine Learning (ML)-Based Braille Lippi Characters and Numbers Detection and Announcement System for Blind Children in Learning, In Gamze Sart (Eds.), Social Reflections of Human-Computer Interaction in Education, Management, and Economics, IGI Global. https://doi.org/10.4018/979-8-3693-3033-3.ch002

[51]. Liyakat, K.K.S. (2023a). Machine Learning Approach Using Artificial Neural Networks to Detect Malicious Nodes in IoT Networks. In: Shukla, P.K., Mittal, H., Engelbrecht, A. (eds) Computer Vision and Robotics. CVR 2023. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-99-4577-1_3

[52]. Liyakat Kazi, K. S. (2024). ChatGPT: An Automated Teacher's Guide to Learning. In R. Bansal, A. Chakir, A. Hafaz Ngah, F. Rabby, & A. Jain (Eds.), AI Algorithms and ChatGPT for Student Engagement in Online Learning (pp. 1-20). IGI Global. https://doi.org/10.4018/979-8-3693-4268-8.ch001

[53]. Liyakat. (2025). IoT Technologies for the Intelligent Dairy Industry: A New Challenge. In S. Thandekkattu& N. Vajjhala (Eds.), Designing Sustainable Internet of Things Solutions for Smart Industries (pp. 321-350). IGI Global. https://doi.org/10.4018/979-8-3693-5498-8.ch012

[54]. Liyakat, K. K. (2025a). Heart Health Monitoring Using IoT and Machine Learning Methods. In A. Shaik (Ed.), AI-Powered Advances in Pharmacology (pp. 257-282). IGI Global. https://doi.org/10.4018/979-8-3693-3212-2.ch010

[55]. Liyakat. (2025d). AI-Driven-IoT(AIIoT)-Based Decision Making in Kidney Diseases Patient Healthcare Monitoring: KSK Approach for Kidney Monitoring. In L. Özgür Polat & O. Polat (Eds.), AI-Driven Innovation in Healthcare Data Analytics (pp. 277-306). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-7277-7.ch009

[56]. Liyakat, K.K.S. (2024). Machine Learning Approach Using Artificial Neural Networks to Detect Malicious Nodes in IoT Networks. In: Udgata, S.K., Sethi, S., Gao, XZ. (eds) Intelligent Systems. ICMIB 2023. Lecture Notes in Networks and Systems, vol 728. Springer, Singapore.https://doi.org/10.1007/978-981-99-3932-9_12 available at: https://link.springer.com/chapter/10.1007/978-981-99-3932-9_12

[57]. M Pradeepa, et al. (2022). Student Health Detection using a Machine Learning Approach and IoT, 2022 IEEE 2nd Mysore sub section International Conference (MysuruCon), 2022. Available at: https://ieeexplore.ieee.org/document/9972445

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, May 2025
Impact Factor: 7.67

[58]. Mahant, M. A. (2025). Machine Learning-Driven Internet of Things (MLIoT)-Based Healthcare Monitoring System. In N. Wickramasinghe (Ed.), Digitalization and the Transformation of the Healthcare Sector (pp. 205-236). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-9641-4.ch007

[59]. Mulani AO, Liyakat KKS, Warade NS, et al (2025). . ML-powered Internet of Medical Things Structure for Heart Disease Prediction. Journal of Pharmacology and Pharmacotherapeutics. 2025; 0(0). doi:10.1177/0976500X241306184

[60]. Odnala, S., Shanthy, R., Bharathi, B., Pandey, C., Rachapalli, A., & Liyakat, K. K. S. (2025). Artificial Intelligence and Cloud-Enabled E-Vehicle Design with Wireless Sensor Integration. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.5107242

[61]. P. Neeraja, R. G. Kumar, M. S. Kumar, K. K. S. Liyakat and M. S. Vani. (2024), DL-Based Somnolence Detection for Improved Driver Safety and Alertness Monitoring. 2024 IEEE International Conference on Computing, Power and Communication Technologies (IC2PCT), Greater Noida, India, 2024, pp. 589-594, doi: 10.1109/IC2PCT60090.2024.10486714. Available at: https://ieeexplore.ieee.org/document/10486714

[62]. Prashant K Magadum (2024). Machine Learning for Predicting Wind Turbine Output Power in Wind Energy Conversion Systems, Grenze International Journal of Engineering and Technology, Jan Issue, Vol 10, Issue 1, pp. 2074-2080. Grenze ID: 01.GIJET.10.1.4_1 Available at: https://thegrenze.com/index.php?display=page&view=journalabstract&absid=2514&id=8

[63]. Priya Mangesh Nerkar, Bhagyarekha Ujjwalganesh Dhaware. (2023). Predictive Data Analytics Framework Based on Heart Healthcare System (HHS) Using Machine Learning, Journal of Advanced Zoology, 2023, Volume 44, Special Issue -2, Page 3673:3686. Available at: https://jazindia.com/index.php/jaz/article/view/1695

[64]. Priya Nerkar and Sultanabanu, (2024). IoT-Based Skin Health Monitoring System, International Journal of Biology, Pharmacy and Allied Sciences (IJBPAS). 2024, 13(11): 5937-5950. https://doi.org/10.31032/IJBPAS/2024/13.11.8488

[65]. S. B. Khadake, A. B. Chounde, A. A. Suryagan, M. H. M. and M. R. Khadatare, (2024). AI-Driven-IoT(AIIoT) Based Decision Making System for High-Blood Pressure Patient Healthcare Monitoring, 2024 International Conference on Sustainable Communication Networks and Application (ICSCNA), Theni, India, 2024, pp. 96-102, doi: 10.1109/ICSCNA63714.2024.10863954.

[66]. Sayyad. (2025a). AI-Powered-IoT (AIIoT)-Based Decision-Making System for BP Patient's Healthcare Monitoring: KSK Approach for BP Patient Healthcare Monitoring. In S. Aouadni& I. Aouadni (Eds.), Recent Theories and Applications for Multi-Criteria Decision-Making (pp. 205-238). IGI Global.https://doi.org/10.4018/979-8-3693-6502-1.ch008

[67]. Sayyad (2025b). AI-Powered IoT (AI IoT) for Decision-Making in Smart Agriculture: KSK Approach for Smart Agriculture. In S. Hai-Jew (Ed.), Enhancing Automated Decision-Making Through AI (pp. 67-96). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-6230-3.ch003

[68]. Sayyad (2025c). KK Approach to Increase Resilience in Internet of Things: A T-Cell Security Concept. In D. Darwish & K. Charan (Eds.), Analyzing Privacy and Security Difficulties in Social Media: New Challenges and Solutions (pp. 87-120). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-9491-5.ch005

[69]. Sayyad, (2025). KK Approach for IoT Security: T-Cell Concept. In Rajeev Kumar, Sheng-Lung Peng, & Ahmed Elngar (Eds.), Deep Learning Innovations for Securing Critical Infrastructures. IGI Global Scientific Publishing.

[70]. Sayyad (2025d). Healthcare Monitoring System Driven by Machine Learning and Internet of Medical Things (MLIoMT). In V. Kumar, P. Katina, & J. Zhao (Eds.), Convergence of Internet of Medical Things (IoMT) and Generative AI (pp. 385-416). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-6180-1.ch016

[71]. Shinde, S. S., Nerkar, P. M., Kazi, S. S., & Kazi, V. S. (2025). Machine Learning for Brand Protection: A Review of a Proactive Defense Mechanism. In M. Khan & M. Amin Ul Haq (Eds.), Avoiding Ad Fraud

and Supporting Brand Safety: Programmatic Advertising Solutions (pp. 175-220). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-7041-4.ch007

[72]. Upadhyaya, A. N., Surekha, C., Malathi, P., Suresh, G., Suriyan, K., & Liyakat, K. K. S. (2025). Pioneering cognitive computing for transformative healthcare innovations. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.5086894.

[73]. Ashit Gaikwad, Amogsidha Chendke, Nizam Mulani, and Mangrule Sarika, "Submersible Pump Theft Indicator", IEJRD - International Multidisciplinary Journal, vol. 5, no. 4, p. 5, May 2020. Available at: https://www.iejrd.com/index.php/%20/article/view/627

[74]. Mr. Akhilesh Raut, Mr. Mahesh Mali, Miss. Trupti Mashale, Prof. Kazi K. S. (2018). Bagasse Level Monitoring System, International Journal of Trend in Scientific Research and Development (ijtsrd), Volume-2, Issue-3, April 2018, pp.1657-1659, URL: https://www.ijtsrd.com/papers/ijtsrd11469.pdf

[75]. Altaf Osman Mulani, Rajesh Maharudra Patil "Discriminative Appearance Model For Robust Online Multiple Target Tracking", Telematique, 2023, Vol 22, Issue 1, pp. 24- 43.

[76]. M Sunil Kumar, D Ganesh, Anil V Turukmane, Umamaheswararao Batta, ,"Deep Convolution Neural Network based solution for detecting plant Diseases", Journal of Pharmaceutical Negative Results, 2022, Vol 13, Special Issue- I, pp. 464-471,

[77]. Halli U M, "Nanotechnology in IoT Security", Journal of Nanoscience, Nanoengineering & Applications, 2022, Vol 12, issue 3, pp. 11 – 16.

[78]. Wale Anjali D., Rokade Dipali, et al, "Smart Agriculture System using IoT", International Journal of Innovative Research In Technology, 2019, Vol 5, Issue 10, pp.493 - 497.

[79]. Kazi K. S., "Significance And Usage Of Face Recognition System", Scholarly Journal For Humanity Science and English Language, 2017, Vol 4, Issue 20, pp. 4764 - 4772.

[80]. Miss. A. J. Dixit, et al, "Iris Recognition by Daugman's Method", International Journal of Latest Technology in Engineering, Management & Applied Science, 2015, Vol 4, Issue 6, pp 90 - 93.

[81]. Kazi K S L, "Significance of Projection and Rotation of Image in Color Matching for High-Quality Panoramic Images used for Aquatic study", International Journal of Aquatic Science, 2018, Vol 09, Issue 02, pp. 130 – 145.

[82]. Halli U.M., "Nanotechnology in E-Vehicle Batteries", International Journal of Nanomaterials and Nanostructures. 2022; Vol 8, Issue 2, pp. 22–27.

[83]. Pankaj R Hotkar, Vishal Kulkarni, et al, "Implementation of Low Power and area efficient carry select Adder", International Journal of Research in Engineering, Science and Management, 2019, Vol 2, Issue 4, pp. 183 - 184.

[84]. Kazi K S, "Detection of Malicious Nodes in IoT Networks based on Throughput and ML", Journal of Electrical and Power System Engineering, 2023, Volume-9, Issue 1, pp. 22- 29.

[85]. Karale Nikita, Jadhav Supriya, et al, "Design of Vehicle system using CAN Protocol", International Journal of Research in Applied science and Engineering Technology, 2020, Vol 8, issue V, pp. 1978 - 1983, http://doi.org/10.22214/ijraset.2020.5321.

[86]. K. Kazi, "Lassar Methodology for Network Intrusion Detection", Scholarly Research Journal for Humanity science and English Language, 2017, Vol 4, Issue 24, pp.6853 - 6861.

[87]. Miss Argonda U A, "Review paper for design and simulation of a Patch antenna by using HFSS", International Journal of Trends in Scientific Research and Development, 2018, Vol 2, issue-2, pp. 158 - 160.

[88]. Kazi K., "Hybrid optimum model development to determine the Break", Journal of Multimedia Technology & Recent Advancements, 2022, vol 9, issue 2, pp. 24 – 32.

[89]. Ms. Yogita Shirdale, et al, "Analysis and design of Capacitive coupled wideband Microstrip antenna in C and X band: A Survey", Journal GSD-International society for green, Sustainable Engineering and Management, 2014, Vol 1, issue 15, pp. 1 - 7.

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, May 2025
Impact Factor: 7.67

[90]. Ms. Shweta Nagare, et al., "Different Segmentation Techniques for brain tumor detection: A Survey", MM- International society for green, Sustainable Engineering and Management, 2014, Vol 1, issue 14, pp.29 - 35.

[91]. Kazi K., "Reverse Engineering's Neural Network Approach to human brain", Journal of Communication Engineering & Systems, 2022, vol 12, issue 2, pp. 17 – 24.

[92]. Miss. A. J. Dixit, et al, "A Review paper on Iris Recognition", Journal GSD International society for green, Sustainable Engineering and Management, 2014, Vol 1, issue 14, pp. 71 - 81.

[93]. Ms. Shweta Nagare, et al., "An Efficient Algorithm brain tumor detection based on Segmentation and Thresholding", Journal of Management in Manufacturing and services, 2015, Vol 2, issue 17, pp.19 - 27.

[94]. Kazi K., "Model for Agricultural Information system to improve crop yield using IoT", Journal of open Source development, 2022, vol 9, issue 2, pp. 16 – 24.

[95]. Miss. A. J. Dixit, et al, "Iris Recognition by Daugman's Algorithm – an Efficient Approach", Journal of applied Research and Social Sciences, 2015, Vol 2, issue 14, pp. 1 - 4.

[96]. Shirgan S S, " Face Recognition based on Principal Component Analysis and Feed Forward Neural Network", National Conference on Emerging trends in Engineering, Technology, Architecture, 2010, pp. 250 - 253.

[97]. Ms. Yogita Shirdale, et al., "Coplanar capacitive coupled probe fed micro strip antenna for C and X band", International Journal of Advanced Research in Computer and Communication Engineering, 2016, Vol 5, Issue 4, pp. 661 - 663.

[98]. Ravi Aavula, Amar Deshmukh, V A Mane, et al, "Design and Implementation of sensor and IoT based Remembrance system for closed one", Telematique, 2022, Vol 21, Issue 1, pp. 2769 - 2778.

[99]. Salunke Nikita, et al, "Announcement system in Bus", Journal of Image Processing and Intelligent remote sensing, 2022, Vol 2, issue 6.

[100]. Madhupriya Sagar Kamuni, et al, "Fruit Quality Detection using Thermometer", Journal of Image Processing and Intelligent Remote Sensing, 2022, Vol 2, Issue 5.

[101]. Shweta Kumtole, et al, " Automatic wall painting robot Automatic wall painting robot", Journal of Image Processing and Intelligent remote sensing, 2022, Vol 2, issue 6

[102]. Kadam Akansha, et al, "Email Security", Journal of Image Processing and Intelligent remote sensing, 2022, Vol 2, issue 6.

[103]. K. Kazi, "Systematic Survey on Alzheimer (AD) Diseases Detection", 2022.

[104]. K. Kazi, "A Review paper Alzheimer", 2022.

[105]. Mrunal M Kapse, et al, "Smart Grid Technology", International Journal of Information Technology and Computer Engineering, Vol 2, Issue 6 .

[106]. Satpute Pratiskha Vaijnath, Mali Prajakta et al. "Smart safty Device for Women", International Journal of Aquatic Science, 2022, Vol 13, Issue 1, pp. 556 - 560.

[107]. Miss. Priyanka M Tadlagi, et al, "Depression Detection", Journal of Mental Health Issues and Behavior (JHMIB), 2022, Vol 2, Issue 6, pp. 1 – 7.

[108]. Waghmare Maithili, et al, "Smart watch system", International journal of information Technology and computer engineering (IJITC), 2022, Vol 2, issue 6, pp. 1 - 9.

[109]. Prof. Kazi Kutubuddin S. L., "Situation Invariant face recognition using PCA and Feed Forward Neural network", Proceeding of International Conference on Advances in Engineering, Science and Technology, 2016, pp. 260- 263.

[110]. Prof. Kazi Kutubuddin S. L., "An Approach on Yarn Quality Detection for Textile Industries using Image Processing", Proceeding of International Conference on Advances in Engineering, Science and Technology, 2016, pp. 325-330.

[111]. Divya Swami, et al, "Sending notification to someone missing you through smart watch", International journal of information Technology & computer engineering (IJITC), 2022, Vol 2, issue 8, pp. 19 – 24.

[112]. Shreya Kalmkar, Afrin, et al., " 3D E-Commers using AR", International Journal of Information Technology & Computer Engineering (IJITC), 2022, Vol 2, issue 6, pp. 18-27.

[113]. Kazi Kutubuddin S. L., "Predict the Severity of Diabetes cases, using K-Means and Decision Tree Approach", Journal of Advances in Shell Programming, 2022, Vol 9, Issue 2, pp. 24-31.

[114]. K. K. Sayyad Liyakat, "Nanotechnology Application in Neural Growth Support System", Nano Trends: A Journal of Nanotechnology and Its Applications, 2022, Vol 24, issue 2, pp. 47 – 55.

[115]. Kazi Kutubuddin S. L., "A novel Design of IoT based 'Love Representation and Remembrance' System to Loved One's", Gradiva Review Journal, 2022, Vol 8, Issue 12, pp. 377 - 383.

[116]. Sakshi M. Hosmani, et al., "Implementation of Electric Vehicle system", Gradiva Review Journal, 2022, Vol 8, Issue 12, pp. 444 – 449.

[117]. K. K., "Multiple object Detection and Classification using sparsity regularized Pruning on Low quality Image/ video with Kalman Filter Methodology (Literature review)", 2022.

[118]. K. Kazi, "Smart Grid energy saving technique using Machine Learning" Journal of Instrumentation Technology and Innovations, 2022, Vol 12, Issue 3, pp. 1 – 10.

[119]. Waghmode D S, et al, "Voltage Sag mitigation in DVR based on Ultra capacitor", Lambart Publications. 2022, ISBN – 978-93-91265-41-0

[120]. Prof. Vinay S , et al, "Multiple object detection and classification based on Pruning using YOLO", Lambart Publications, 2022, ISBN – 978-93-91265-44-1

[121]. Kazi Kutubuddin S. L., "Business Mode and Product Life Cycle to Improve Marketing in Healthcare Units", E-Commerce for future & Trends, 2022, vol 9, issue 3, pp. 1-9.

[122]. Dr. A. O. Mulani, "Effect of Rotation and Projection on Real time Hand Gesture Recognition system for Human Computer Interaction", Journal of The Gujrat Research Society, 2019, Vol 21, issue 16, pp. 3710 – 3718.

[123]. Kazi K S, "IoT based Healthcare system for Home Quarantine People", Journal of Instrumentation and Innovation sciences, 2023, Vol 8, Issue 1, pp. 1- 8.

[124]. Ms. Machha Babitha, C Sushma, et al, "Trends of Artificial Intelligence for online exams in education", International journal of Early Childhood special Education, 2022, Vol 14, Issue 01, pp. 2457-2463.

[125]. Dr. J. Sirisha Devi, Mr. B. Sreedhar, et al, "A path towards child-centric Artificial Intelligence based Education", International Journal of Early Childhood special Education, 2022, Vol 14, Issue 03, pp. 9915-9922.

[126]. Mr. D. Sreenivasulu, Dr. J. Sirishadevi, et al, "Implementation of Latest machine learning approaches for students Grade Prediction", International Journal of Early Childhood special Education, 2022, Vol 14, Issue 03, pp. 9887-9894.

[127]. Nilima S. Warhade, Rahul S. Pol, Hemlata M. Jadhav, Altaf O. Mulani, "Yarn Quality detection for Textile Industries using Image Processing", Journal of Algebraic Statistics, 2022, Vol 13, Issue 3, pp. 3465-3472.

[128]. Rahul S. Pole, Amar Deshmukh, Makarand Jadhav, et al, "iButton Based Physical access Authorization and security system", Journal of Algebraic Statistics, 2022, Vol 13, issue 3, pp. 3822-3829.

[129]. V A Mane, Dr K P Pardeshi, Dr. D.B Kadam, Dr. Pandyaji K K, "Development of Pose invariant Face Recognition method based on PCA and Artificial Neural Network", Journal of Algebraic Statistics, 2022, Vol 13, issue 3, pp. 3676-3684.

[130]. Dr. K. P. Pardeshi et al, "Development of Machine Learning based Epileptic Seizureprediction using Web of Things (WoT)" , NeuroQuantology, 2022, Vol 20, Issue 8, pp. 9394- 9409.

[131]. Dr. K. P. Pardeshi et al, "Implementation of Fault Detection Framework for Healthcare Monitoring System Using IoT, Sensors in Wireless Environment", Telematique, 2022, Vol 21, Issue 1, pp. 5451 – 5460.

[132]. Dr. B. D. Kadam et al, "Implementation of Carry Select Adder (CSLA) for Area, Delay and Power Minimization", Telematique, 2022, Vol 21, issue 1, pp. 5461 – 5474.

[133]. Kazi K S L, "IoT-based weather Prototype using WeMos", Journal of Control and Instrumentation Engineering, 2023, Vol 9, Issue 1, pp. 10 – 22.

[134]. Ravi A., et al, "Pattern Recognition- An Approach towards Machine Learning", Lambert Publications, 2022, ISBN- 978-93-91265-58-8

[135]. Kazi Kutubuddin, "Detection of Malicious Nodes in IoT Networks based on packet loss using ML", Journal of Mobile Computing, Communication & mobile Networks, 2022, Vol 9, Issue 3, pp. 9 -16.

[136]. Kazi Kutubuddin, "Big data and HR Analytics in Talent Management: A Study", Recent Trends in Parallel Computing, 2022, Vol 9, Issue 3, pp. 16-26.

[137]. Kazi K S, "IoT-Based Healthcare Monitoring for COVID-19 Home Quarantined Patients", Recent Trends in Sensor Research & Technology, 2022, Vol 9, Issue 3. pp. 26 – 32.

[138]. Gouse Mohiuddin Kosgiker, "Machine Learning- Based System, Food Quality Inspection and Grading in Food industry", International Journal of Food and Nutritional Sciences, 2018, Vol 11, Issue 10, pp. 723-730.

[139]. U M Halli, Voltage Sag Mitigation Using DVR and Ultra Capacitor. Journal of Semiconductor Devices and Circuits. 2022; 9(3): 21–31p.

[140]. Kazi Kutubuddin, "Blockchain-Enabled IoT Environment to Embedded System a Self-Secure Firmware Model", Journal of Telecommunication study, 2023, Vol 8, Issue 1.

[141]. Kazi Kutubuddin, "A Study HR Analytics Big Data in Talent Management", Research and Review: Human Resource and Labour Management, 2023, Volume-4, Issue-1, pp. 16-28.

[142]. Narender Chinthamu, M. Prasad, "Self-Secure firmware model for Blockchain-Enabled IOT environment to Embedded system", Eur. Chem. Bull., 2023, 12(S3), pp. 653 – 660. DOI:10.31838/ecb/2023.12.s3.075

[143]. Vahida, et al, "Deep Learning, YOLO and RFID based smart Billing Handcart", Journal of Communication Engineering & Systems, 2023, 13(1), pp. 1-8.

[144]. Kazi Kutubuddin Sayyad Liyakat, "Analysis for Field distribution in Optical Waveguide using Linear Fem method", Journal of Optical communication Electronics, 2023, Vol 9, Issue 1, pp. 23- 28.

[145]. Miss. Mamdyal, Miss. Sandupatia, et al, "GPS Tracking System", International Journal of Advanced Research in Science, Communication and Technology (IJARSCT), 2022, Vol 2, issue- 1, pp. 2492 – 2529, Available at: https://ijarsct.co.in/A7317.pdf

[146]. Rajesh Maharudra Patil, "Modelo De Apariencia Discriminatorio Para Un Sólido Seguimiento En Línea De Múltiples Objetivos", Telematique, 2023, Vol 22, Issue 1, pp. 24- 43.

[147]. Karale Aishwarya A, et al, "Smart Billing Cart Using RFID, YOLO and Deep Learning for Mall Administration", International Journal of Instrumentation and Innovation Sciences, 2023, Vol 8, Issue- 2.

[148]. Sultanabanu Kazi, et al.(2023), Fruit Grading, Disease Detection, and an Image Processing Strategy, Journal of Image Processing and Artificial Intelligence, 9(2), 17-34.

[149]. Sultanabanu Kazi, Mardanali Shaikh, "Machine Learning in the Production Process Control of Metal Melting" Journal of Advancement in Machines, Volume 8 Issue 2 (2023).

[150]. Kazi Kutubuddin Sayyad Liyakat, "IoT based Smart HealthCare Monitoring", In: Rhituraj Saikia (eds), Liberation of Creativity: Navigating New Frontiers in Multidisciplinary Research, Vol. 2, July 2023, pp. 456- 477, ISBN: 979-8852143600

[151]. Kazi Kutubuddin Sayyad Liyakat, "IoT based Substation Health Monitoring", In: Rhituraj Saikia (eds), Magnification of Research: Advanced Research in Social Sciences and Humanities, Volume 2, October 2023, pp. 160 – 171, ISBN: 979-8864297803

[152]. Priya Mangesh Nerkar, Sunita Sunil Shinde, et al, "Monitoring Fresh Fruit and Food Using IoT and Machine Learning to Improve Food Safety and Quality", Tuijin Jishu/Journal of Propulsion Technology, Vol. 44, No. 3, (2023) , pp. 2927 – 2931.

[153]. Kazi Sultanabanu Sayyad Liyakat (2023). Integrating IoT and Mechanical Systems in Mechanical Engineering Applications, Journal of Mechanical Robotics, 8(3), 1-6.

[154]. Kazi Sultanabanu Sayyad Liyakat (2023). IoT Changing the Electronics Manufacturing Industry, Journal of Analog and Digital Communications, 8(3), 13-17.

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, May 2025
Impact Factor: 7.67

[155]. Kazi Sultanabanu Sayyad Liyakat (2023). IoT in the Electric Power Industry, Journal of Controller and Converters, 8(3), 1-7.

[156]. Kazi Sultanabanu Sayyad Liyakat (2023). Review of Integrated Battery Charger (IBC) for Electric Vehicles (EV), Journal of Advances in Electrical Devices, 8(3), 1-11.

[157]. Kazi Sultanabanu Sayyad Liyakat (2023). ML in the Electronics Manufacturing Industry, Journal of Switching Hub, 8(3), 9-13.

[158]. Kazi Sultanabanu Sayyad Liyakat (2023). IoT in Electrical Vehicle: A Study, Journal of Control and Instrumentation Engineering, 9(3), 15-21.

[159]. Kazi Sultanabanu Sayyad Liyakat (2023). PV Power Control for DC Microgrid Energy Storage Utilisation, Journal of Digital Integrated Circuits in Electrical Devices, 8(3), 1-8.

[160]. Kazi Sultanabanu Sayyad Liyakat (2023). Electronics with Artificial Intelligence Creating a Smarter Future: A Review, Journal of Communication Engineering and Its Innovations, 9(3), 38-42.

[161]. Kazi Sultanabanu Sayyad Liyakat (2023). Dispersion Compensation in Optical Fiber: A Review, Journal of Telecommunication Study, 8(3), 14-19.

[162]. Kazi Sultanabanu Sayyad Liyakat (2023). IoT Based Arduino-Powered Weather Monitoring System, Journal of Telecommunication Study, 8(3), 25-31.

[163]. Kazi Sultanabanu Sayyad Liyakat (2023). Arduino Based Weather Monitoring System, Journal of Switching Hub, 8(3), 24-29.

[164]. V D Gund, et al. (2023). PIR Sensor-Based Arduino Home Security System, Journal of Instrumentation and Innovation Sciences, 8(3), 33-37.

[165]. Kazi Kutubuddin Sayyad Liyakat (2023), System for Love Healthcare for Loved Ones based on IoT. Research Exploration: Transcendence of Research Methods and Methodology, Volume 2, ISBN: 979-8873806584, ASIN : B0CRF52FSX

[166]. K K S Liyakat (2022). Implementation of e-mail security with three layers of authentication, Journal of Operating Systems Development and Trends, 9(2), 29-35.

[167]. Mishra Sunil B., et al. (2024). Nanotechnology's Importance in Mechanical Engineering, Journal of Fluid Mechanics and Mechanical Design, 6(1), 1-9.

[168]. Kazi Kutubuddin Sayyad Liyakat (2024). Blynk IoT-Powered Water Pump-Based Smart Farming, Recent Trends in Semiconductor and Sensor Technology, 1(1), 8-14.

[169]. Sultanabanu Sayyad Liyakat, (2024). IoT-based Alcohol Detector using Blynk, Journal of Electronics Design and Technology, 1(1), 10-15.

[170]. Kazi Sultanabanu Sayyad Liyakat, (2023). Accepting Internet of Nano-Things: Synopsis, Developments, and Challenges. Journal of Nanoscience, Nanoengineering & Applications. 2023; 13(2): 17–26p. DOI: https://doi.org/10.37591/jonsnea.v13i2.1464

[171]. Mishra Sunil B., et al. (2024). Review of the Literature and Methodological Structure for IoT and PLM Integration in the Manufacturing Sector, Journal of Advancement in Machines, 9(1), 1-5.

[172]. Mishra Sunil B., et al. (2024). AI-Driven IoT (AI IoT) in Thermodynamic Engineering, Journal of Modern Thermodynamics in Mechanical System, 6(1), 1-8.

[173]. Kazi Kutubuddin Sayyad Liyakat (2024). Impact of Solar Penetrations in Conventional Power Systems and Generation of Harmonic and Power Quality Issues, Advance Research in Power Electronics and Devices, 1(1), 10-16.

[174]. Sayyad Liyakat. Intelligent Watering System (IWS) for Agricultural Land Utilising Raspberry Pi. Recent Trends in Fluid Mechanics. 2023; 10(2): 26–31p.

[175]. Sunil Shivaji Dhanwe, et al. (2024). AI-driven IoT in Robotics: A Review, Journal of Mechanical Robotics, 9(1), 41-48.

[176]. Kazi Sultanabanu Sayyad Liyakat, Kazi Kutubuddin Sayyad Liyakat. Nanomedicine as a Potential Therapeutic Approach to COVID-19. International Journal of Applied Nanotechnology. 2023; 9(2): 27–

35p. Available at: https://materials.journalspub.info/index.php?journal=IJAN&page=article&op=view&path%5B%5D=1038

[177]. Megha Nagrale, Rahul S. Pol, Ganesh B. Birajadar, Altaf O. Mulani, (2024). Internet of Robotic Things in Cardiac Surgery: An Innovative Approach, African Journal of Biological Sciences, Vol 6, Issue 6, pp. 709-725 doi: 10.33472/AFJBS.6.6.2024.709-725

[178]. Kazi Kutubuddin Sayyad Liyakat, (2023). IoT based Healthcare Monitoring for COVID- Subvariant JN-1, Journal of Electronic Design Technology, Vol 14, No 3 (2023).

[179]. Kazi Kutubuddin Sayyad Liyakat (2023). Smart Motion Detection System using IoT: A NodeMCU and Blynk Framework, Journal of Microelectronics and Solid State Devices, Vol 10, No 3 (2023).

[180]. Chopade Mallikarjun Abhangrao (2024), Internet of Things in Mechatronics for Design and Manufacturing: A Review, Journals of Mechatronics Machine Design and Manufacturing, Vol 6, Issue 1.

[181]. Kazi Kutubuddin Sayyad Liyakat (2023). Nanotechnology in Precision Farming: The Role of Research, International Journal of Nanomaterials and Nanostructures, Vol 9, No 2 (2023), https://doi.org/10.37628/ijnn.v9i2.1051

[182]. Kazi Kutubuddin Sayyad Liyakat. (2023). Home Automation System Based on GSM. Journal of VLSI Design Tools & Technology. 2023; 13(3): 7–12p. https://doi.org/10.37591/jovdtt.v13i3.7877

[183]. Kazi Kutubuddin Sayyad Liyakat, (2024). Intelligent Watering System(IWS) for Agricultural Land Utilising Raspberry Pi, Recent Trends in Fluid Mechanics, Vol 10, No 2, pp. 26-31.

[184]. Kazi Kutubuddin Sayyad Liyakat (2024). IoT and Sensor-based Smart Agriculturing Driven by NodeMCU, Research & Review: Electronics and Communication Engineering, 1(2), 25-33. Available at: https://matjournals.net/engineering/index.php/RRECE/article/view/742

[185]. Kazi Kutubuddin Sayyad Liyakat (2024). Smart Agriculture based on AI-Driven-IoT(AIIoT): A KSK Approach, Advance Research in Communication Engineering and its Innovations, 1(2), 23-32. Available at: https://matjournals.net/engineering/index.php/ARCEI/article/view/746

[186]. K Kazi(2024). Complications with Malware Identification in IoT and an Overview of Artificial Immune Approaches. Research & Reviews: A Journal of Immunology. 2024; 14(01):54-62. Available from: https://journals.stmjournals.com/rrjoi/article=2024/view=144241

[187]. Nida N. Shaikh, Milind D. Chavan, V.G. Shirshikar,(2023). PV Penetrations in Conventional Power System and Generation of Harmonic and Power Quality Issues: A Review. International Journal of Power Electronics Controllers and Converters. 2023; 9(2): 12–19p. Available at: https://ecc.journalspub.info/index.php?journal=JPECC&page=article&op=view&path%5B%5D=1976

[188]. Vaibhav L. Jadhav, Arjun P. Shinde, (2024). Detection of Fire in the Environment via a Robot Based Fire Fighting System Using Sensors, International Journal of Advanced Research in Science, Communication and Technology (IJARSCT), Volume 4, Issue 4, pp. 410 – 418.

[189]. Kazi Kutubuddin Sayyad Liyakat (2024). Nanotechnology in Medical Applications: A Study. Nano Trends: A Journal of Nanotechnology and Its Applications. 2024; 26(2): 1–11p.

[190]. Kazi Kutubuddin Sayyad Liyakat. (2024). Nanotechnology in BattleField: A Study. Journal of Nanoscience, Nanoengineering & Applications. 2024; 14(2): 18–30p.

[191]. Sultananbanu Sayyad Liyakat Kazi, (2024). Polymer Applications in Energy Generation and Storage: A Forward Path. Journal of Nanoscience, Nanoengineering & Applications. 2024; 14(2): 31–39p.

[192]. Kazi Kutubuddin Sayyad Liyakat, (2024). Review of Biopolymers in Agriculture Application: An Eco-Friendly Alternative. International Journal of Composite and Constituent Materials. 2024; 10(1): 50–62p.

[193]. Kazi Kutubuddin Sayyad Liyakat (2024). Railway Health-Monitoring Using KSK Approach: Decision-Making Using AIIoT Approach in Railways, Journal of Controller and Converters, 9(3), 1-10. Available at: https://matjournals.net/engineering/index.php/JCC/article/view/1047

[194]. K K Sayyad Liyakat. (2024). Impact of Nanotechnology on Battlefield Welfare: A Study. International Journal of Nanobiotechnology. 2024; 10(2): 19– 32p.

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, May 2025
Impact Factor: 7.67

[195]. Sultanabanu Sayyad Liyakat, (2024q). Nanotechnology in Healthcare Applications: A Study. International Journal of Nanobiotechnology. 2024; 10(2): 48–58p.

[196]. Kazi Kutubuddin Sayyad Liyakat (2024). A Study on AI-driven IoT (AIIoT) based Decision Making: KSK Approach in Robot for Medical Applications, Recent Trends in Semiconductor and Sensor Technology, 1(3), 1-17. Available at: https://matjournals.net/engineering/index.php/RTSST/article/view/1044

[197]. Kazi Kutubuddin Sayyad Liyakat (2024). Wireless Train Collision Avoidance System, Advance Research in Communication Engineering and its Innovations, 1(3), 16-25.

[198]. Kazi Kutubuddin Sayyad Liyakat. (2024). Internet of Battlefield Things: An IoBT-inspired Battlefield of Tomorrow. Journal of Telecommunication, Switching Systems and Networks. 2024; 11(3): 11–19p.

[199]. Sunil B. Mishra (2024d). AI-Driven-IoT (AIIoT)-Based Decision Making in Manufacturing Processes in Mechanical Engineering, Journal of Mechanical Robotics, 9(2), 27-38.

[200]. Sunil B. Mishra (2024e). AI-Driven-IoT (AIIoT) Based Decision-Making in Molten Metal Processing, Journal of Industrial Mechanics, 9(2), 45-56.

[201]. Kazi Kutubuddin Sayyad Liyakat, Impact of Nanotechnology on Battlefield Welfare: A Study. International journal of Nanobiotechnology. 2024; 10(02): 19-32p.

[202]. Kazi Sultanabanu Sayyad Liyakat and Kazi Kutubuddin Sayyad Liyakat, Nanosensors in Agriculture Field: A Study. International Journal of Applied Nanotechnology. 2024; 10(02): 12-22p. Available from:https://journalspub.com/publication/ijan-v10i02-11625/

[203]. Kazi Kutubuddin Sayyad Liyakat, Nanotechnology in Space Study. International Journal of Applied Nanotechnology. 2024; 10(02): 39-46p. Available from:https://journalspub.com/publication/ijan-v10i02-11616/

[204]. Dr. Kazi Kutubuddin Sayyad Liyakat. (2024). KSK Approach to Smart Agriculture: Utilizing AI-Driven Internet of Things (AI IoT). Journal of Microcontroller Engineering and Applications. 2024; 11(03):21-32.

[205]. Kazi Kutubuddin Sayyad Liyakat. (2024). Microwave Communication in the Internet of Things: A Study. Journal of RF and Microwave Communication Technologies, 38–49. Retrieved from https://matjournals.net/engineering/index.php/JoRFMCT/article/view/1276

[206]. Kazi Kutubuddin Sayyad Liyakat, (2023). Nanorobotics: A Review, International Journal of Applied Nanotechnology (IJAN), 9(2), pp. 36 – 43. DOI: https://doi.org/10.37628/ijan.v9i2.1019

[207]. Dr. Kazi Kutubuddin Sayyad Liyakat. Sensor and IoT centered Smart Agriculture by NodeMCU. Recent Trends in Sensor Research & Technology. 2024; 11(03):24-32. Available from: https://journals.stmjournals.com/rtsrt/article=2024/view=179744

[208]. Kazi Kutubuddin Sayyad Liyakat.(2024). Carbon based Supercapacitor for Electric Vehicles. Journal of Nanoscience, NanoEngineering & Applications. 2024; 14(03):01-11. Available from: https://journals.stmjournals.com/jonsnea/article=2024/view=179371.

[209]. G M Kosgiker. Satellite Sensing for Sea Level Monitoring: A Transformative Approach to Understanding Climate Change. Journal of Microwave Engineering & Technologies. 2025; 12(1): 33–41p.

[210]. Kazi Kutubuddin Sayyad Liyakat. Transforming IoT Connectivity Through VLSI Technology. International Journal of VLSI Circuit Design & Technology. 2024; 02(02):1-11. Available from: https://journals.stmjournals.com/ijvcdt/article=2024/view=190803

[211]. Kazi Kutubuddin Sayyad Liyakat, "Internet of Robotics Things in Industrial Applications: A Study," Journal of Control and Instrumentation Engineering, vol. 11, no. 1, pp. 1-10, Feb 2025.

[212]. Kazi Kutubuddin Sayyad Liyakat. Fake Cryptocurrecy Detection using Python. Recent Trends in Programming Languages. 2025; 12(1): 1–7p.

[213]. Kazi Kutubuddin Sayyad Liyakat. The Future is Smelling: Exploring the Potential of e-Nose. Journal of Semiconductor Devices and Circuits. 2025; 12(1): 16–27p.

[214]. Sultanabanu Sayyad Liyakat. (2025). Quantum Key Distribution in Optical Fiber Communication: A Study. Trends in Opto-electro & Optical Communication. 2025; 15(1): 30–40p.

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, May 2025
Impact Factor: 7.67

[215]. Kazi Kutubuddin Sayyad Liyakat. Fake Cryptocurrency Detection Using Python. Recent Trends in Programming languages. 2025; 12(01):1-7. Available from: https://journals.stmjournals.com/rtpl/article=2025/view=201421

[216]. Kutubuddin, KSK Approach in LOVE Health: AI-Driven- IoT(AIIoT) based Decision Making System in LOVE Health for Loved One, GRENZE International Journal of Engineering and Technology, 2025, 11(1), pp. 4628-4635. Grenze ID: 01.GIJET.11.1.371_1

[217]. Kazi Kutubuddin Sayyad Liyakat. Multimedia Technology in Healthcare: A Study. Journal of Multimedia Technology & Recent Advancements. 2025; 12(1): 23–29p.

[218]. Kazi Kutubuddin Sayyad Liyakat. TensorFlow- Based Big Data Analytics for IoT Networks: A Study. International Journal of Data Structure Studies. 2025; 3(1): 32–40p.

[219]. Kazi Kutubuddin Sayyad Liyakat. Brand Protection Using Machine Learning: A New Era. E-Commerce for Future & Trends. 2025; 12(1): 33-44p.

[220]. Dhanve and Liyakat, "Machine Learning Forges a New Future for Metal Processing: A Study," International Journal of Artificial Intelligence in Mechanical Engineering, vol. 1, no. 1, pp. 1-12, Mar. 2025.

[221]. Kutubuddin Sayyad Liyakat. e-Skin Applications in Healthcare and Robotics: A Study. Journal of Advancements in Robotics. 2025; 12(1):13 –21p.

[222]. Kutubuddin Sayyad Liyakat. Millimeter Wave in Internet of Things Connectivity: A Study. International Journal of Wireless Security and Networks. 2025; 03(01):13-23.

[223]. Kutubuddin Sayyad Liyakat. TensorFlow-Based Big Data Analytics for IoT Networks: A Study. International Journal of Data Structure Studies. 2025; 03(01):31-38.

[224]. Kutubuddin Sayyad Liyakat. Multimedia Technology in Healthcare: A Study. Journal of Multimedia Technology & Recent Advancements. 2025; 12(01):23-29.

[225]. Jatin M. Patil, "Robotic Surgery using AI-Driven-IoT Based Decision Making for Safety: A Study" International Journal of Artificial Intelligence of Things (AIoT) in Communication Industry, vol. 1, no. 1, pp. 35-44, Mar. 2025.

[226]. K. K. S. Liyakat,(2025). VHDL Programming for Secure True Random Number Generators in IoT Security, Research & Review: Electronics and Communication Engineering, vol. 2, no. 1, pp. 38-47, Mar. 2025.

[227]. Kazi Kutubuddin Sayyad Liyakat. E-Comers and AI: Product Recommendation and Pricing. Journal of Artificial Intelligence Research & Advances. 2025; 12(2): 44–52p

[228]. Kazi Kutubuddin Sayyad Liyakat. Nanorobotics in Cancer Treatment: A Study. International Journal of Nanomaterials and Nanostructures. 2025; 11(1): 1–9p.

[229]. Kazi Kutubuddin Sayyad Liyakat, Jatin M. Patil, Velapure Amol S., Khadake Suhas B. The Intersection of Nanotechnology and IoT: New Era of Connectivity. International Journal of Applied Nanotechnology. 2025; 11(1): 9–17p.

[230]. Kazi Kutubuddin Sayyad Liyakat. Tiny Titans: The Promise of E-Nano Robots in the Fight Against Cancer. Journal of Advancements in Robotics. 2025; 12(2): 12–22p.

[231]. Khadake, S., Kawade, S., Moholkar, S., Pawar, M. (2024). A Review of 6G Technologies and Its Advantages Over 5G Technology. In: Pawar, P.M., *et al.* Techno-societal 2022. ICATSA 2022. Springer, Cham. https://doi.org/10.1007/978-3-031-34644-6_107.

[232]. V. J. Patil, S. B. Khadake, D. A. Tamboli, H. M. Mallad, S. M. Takpere and V. A. Sawant, "Review of AI in Power Electronics and Drive Systems," *2024 3rd International conference on Power Electronics and IoT Applications in Renewable Energy and its Control (PARC)*, Mathura, India, 2024, pp. 94-99, doi: 10.1109/PARC59193.2024.10486488

[233]. A BalkrishnaDudgikar, A Ahmad Akbar Ingalgi, A GensidhaJamadar et al., "Intelligent battery swapping system for electric vehicles with charging stations locator on IoT and cloud platform", International Journal

of Advanced Research in Science Communication and Technology, vol. 3, no. 1, pp. 204-208, January 2023. DOI: 10.48175/IJARSCT-7867. Available at: https://ijarsct.co.in/Paper7867.pdf

[234]. S. B. Khadake and V. J. Patil, "Prototype Design & Development of Solar Based Electric Vehicle," *2023 3rd International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON)*, Bangalore, India, 2023, pp. 1-7, doi: 10.1109/SMARTGENCON60755.2023.10442455.

[235]. V. J. Patil, S. B. Khadake, D. A. Tamboli, H. M. Mallad, S. M. Takpere and V. A. Sawant, "A Comprehensive Analysis of Artificial Intelligence Integration in Electrical Engineering," *2024 5th International Conference on Mobile Computing and Sustainable Informatics (ICMCSI)*, Lalitpur, Nepal, 2024, pp. 484-491, doi: 10.1109/ICMCSI61536.2024.00076.

[236]. Suhas B. Khadake, Sudarshan P. Dolli, K.S. Rathod, O.P. Waghmare and A.V. Deshpande, "AN OVERVIEW OF INTELLIGENT TRAFFIC CONTROL SYSTEM USING PLC AND USE OF CURRENT DATA OF VEHICLE TRAVELS", *JournalNX*, pp. 1-4, Jan. 2021.

[237]. Shraddha S Magar, Archana S Sugandhi, Shweta H Pawar, Suhas B Khadake, H. M. Mallad,"Harnessing Wind Vibration, a Novel Approach towards Electric Energy Generation- Review", IJARSCT, Volume 4, Issue 2, October 2024, pp. 73-82. DOI: 10.48175/IJARSCT-19811.

[238]. Khadake, S. B., Padavale, P. V., Dhere, P. M., & Lingade, B. M., "Automatic hand dispenser and temperature scanner for Covid-19 prevention", International Journal of Advanced Research in Science, Communication and Technology, 3(2), 362-367. DOI: 10.48175/IJARSCT-11364. https://ijarsct.co.in/A11364.pdf

[239]. Seema S Landage, Sonali R Chavan, Pooja A Kokate, Sonal P Lohar, M. K. Pawar, Suhas B Khadake.,"Solar Outdoor Air Purifier With Air Quality Monitoring System", Synergies Of Innovation: Proceedings Of Ncstem 2023, Pp. 260-266, September, 2024. Available At: https://www.researchgate.net/publication/383631190_Solar_Outdoor_Air_Purifier_with_Air_Quality_Monitoring_System

[240]. Suhas B. Khadake. (2021). Detecting Salient Objects Of Natural Scene In A Video's Using Spatio-Temporal Saliency &Amp; Colour Map. Journalnx - A Multidisciplinary Peer Reviewed Journal, 2(08), 30–35. Retrieved From Https://Repo.Journalnx.Com/Index.Php/Nx/Article/View/1070

[241]. Khadake Suhas .B. (2021). Detecting Salient Objects In A Video's By Using spatio-Temporal Saliency & Colour Map. International Journal Of Innovations In Engineering Research And Technology, 3(8), 1-9.Https://Repo.Ijiert.Org/Index.Php/Ijiert/Article/View/910.

[242]. Prachi S Bhosale, Pallavi D Kokare, Dipali S Potdar, Shrutika D Waghmode, V A Sawant, Suhas B Khadake.,"DTMF Based Irrigation Water Pump Control System", Synergies Of Innovation: Proceedings Of NCSTEM 2023, Pp. 267-273, September, 2024. Available At: https://www.researchgate.net/publication/383629320_DTMF_Based_Irrigation_Water_Pump_Control_System

[243]. Pramod Korake, Harshwardhan Murade, Rushikesh Doke, Vikas Narale, Suhas B. Khadake, Aniket S Chavan., "Automatic Load Sharing of Distribution Transformer using PLC", Synergies Of Innovation: Proceedings Of NCSTEM 2023, Pp. 253-259, September, 2024. Available At: https://www.researchgate.net/publication/383628063_Automatic_Load_Sharing_of_Distribution_Transformer_using_PLC

[244]. Suhas B khadake, Pranita J Kashid, Asmita M Kawade, Santoshi V Khedekar, H. M. Mallad .,"Electric Vehicle Technology Battery Management –Review", International Journal of Advanced Research in Science, Communication and Technology, Volume 3, Issue 2, Septeber 2023,pp. 319-325. DOI: 10.48175/IJARSCT-13048.Available at: https://www.researchgate.net/publication/374263508_Electric_Vehicle_Technology_Battery_Management_-_Review

[245]. Suhas B. khadake, Amol Chounde, Buddhapriy B. Gopnarayan, Karan Babaso Patil, Shashikant S Kamble. (2024). Human Health Care System: A New Approach towards Life, 15th International Conference on

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, May 2025
Impact Factor: 7.67

Advances in computing, Control, and Telecommunication Technologies, ACT 2024, 2024, 2, pp. 5487-5494.

[246]. Khadake SB, Patil VJ, Mallad HM, Gopnarayan BB, Patil KB. "Maximize farming productivity through agriculture 4.0 based intelligence, with use of agri tech sense advanced crop monitoring system".,Grenze Int J Eng Technol. 2024;10(2):5127–5134. Available At: Https://Thegrenze.Com/Index.Php?Display=Page&View=Journalabstract&Absid=3336&Id=8

[247]. Suhas B Khadake, Santoshi V Khedekar, Asmita M Kawade, Shradhha Shivaji Vyavahare, Pranita J Kashid, Chounde Amol B, H. M. Mallad., "Solar Based Electric Vehicle Charging System-Review", IJARSCT, vol. 4, Issue 2, December 2024, pp. 42-57, DOI: 10.48175/IJARSCT-22705

[248]. Shraddha S Magar, Archana S Sugandhi, Shweta H Pawar, et.al. ," A Research Paper on Harnessing Wind Vibration Novel Approach towards Electric Energy Generation", IJARSCT, Volume 5, Issue 4, May 2025, pp. 533-552. DOI: 10.48175/IJARSCT-26466.

[249]. Akshay B Randive , Sneha Kiran Gaikwad , Suhas B Khadake , Mallad H. M., "Biodiesel: A Renewable Source of Fuel", IJARSCT, vol. 4, Issue 3, December 2024, pp. 225-240, DOI: 10.48175/IJARSCT-22836 Available at: https://www.researchgate.net/publication/387352609_Biodiesel_A_Renewable_Source_of_Fuel

[250]. K. K. Sayyad Liyakat, S. B. Khadake, A. B. Chounde, A. A. Suryagan, M. H. M. and M. R. Khadatare, "AI-Driven-IoT(AIIoT) Based Decision Making System for High-Blood Pressure Patient Healthcare Monitoring," 2024 International Conference on Sustainable Communication Networks and Application (ICSCNA), Theni, India, 2024, pp. 96-102, doi: 10.1109/ICSCNA63714.2024.10863954.

[251]. K. K. Sayyad Liyakat, S. B. Khadake, D. A. Tamboli, V. A. Sawant, M. H. M. and S. Sathe, "AI-Driven-IoT(AIIoT) Based Decision-Making- KSK Approach in Drones for Climate Change Study," *2024 4th International Conference on Ubiquitous Computing and Intelligent Information Systems (ICUIS)*, Gobichettipalayam, India, 2024, pp. 1735-1744, doi: 10.1109/ICUIS64676.2024.10866450.

[252]. G.D.Rai."Nonconventionalenergysource",Khannapublication(2010)ISBN9788174090737

[253]. Typesofwindturbine,www.Teachergeek.com

[254]. ObiLaserproductwebsite(2010),http://www.obilaser.com

[255]. PaulKruger"AlternativeEnergyResources:TheQuestforSustainableEnergy"ISBN:978-0-471-77208-8 February 200

[256]. TheTeslasturbine,Matejpobergas,Adviser:Pro.Dr.RedolfPodornik,Seminar(mach2011)

[257]. KLAVANS, R. Taxonomies; International Comparisons & Policy Applications. Visualization Workshop at National Science Foundation (2008)