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 6, Issue 8, June 2026
Impact Factor: 8.2

Gas Passcode System

Prof. Pooja K. Biradar[1], Srushti Vivekanand Mulage[2], Lavanya Nagnath Chityal[3], Prerana Rajshekhar Bagalkote[4], Disha Dipak Nimbalkar[5]

[1]Assistant Professor, [2–5]Students, Department of Electronics and Telecommunication Engineering, Shree Siddheshwar Women's College of Engineering, Solapur, Maharashtra, India.

Abstract: *This project proposes designing and implementing an LPG gas leakage detection and alert system for households and industries. The increase in deaths caused by LPG explosions has highlighted the need for a gas leak detection system to identify potential hazards. Various gas sensors are used in this process, including wireless technology. The gas sensor detects the presence of LPG gas in the environment, and the microcontroller processes the sensor data to trigger an alarm or shut off the gas supply. The proposed system is intended to prevent accidents, fires, and explosions by providing an early warning and taking necessary actions to minimize the damage caused by gas leakage. The proposed LPG Gas Leak Detection Smart Tool effectively addresses the growing concern about LPG explosions and their catastrophic consequences.*

Keywords: Arduino Uno, LPG Safety, Gas Leakage Detection, Password Authentication, MQ-2 Sensor

I. INTRODUCTION

The use of liquefied petroleum gas (LPG) as a fuel source has become increasingly popular in households and industries due to its affor dability and efficiency. However, the risk associated with LPG gas leakage cannot be overstated. LPG is highly flammable and explosive, and its leakage can lead to accidents, fires, and explosions that can cause fatalities and significant damage t o property. Therefore, there is a growing need for an effective gas leak detection system that can identify potential hazards and provide early warning to prevent catastrophic consequences. To address this concern, this project proposes designing and implementing an LPG gas leakage detection and alert system for households and industries. The system is designed to detect the presence of LPG gas using various gas sensors, including wireless technology. These sensors can detect the con centration of LPG gas in the environment and send the data to a microcontroller for processing. The microcontroller proce sses the sensor data and triggers an alarm or shuts off the gas supply in case of a gas leak. Additionally, the system is desig ned to send an alert in case of gas leakage, providing an early warning to prevent accidents, fires, and explosions.

The proposed LPG Gas Leak Detection Smart Tool offers a reliable and effective solution to address the growing concern about LPG explosions and their catastrophic consequences. By incorporating gas sensors, wireless technology, microcontr ollers, and an alarm system, the system provides enhanced house safety and industrial safety, preventing potential hazards and minimizing the damage caused by gas leakage[1-169].

Overall, this project aims to develop a gas leak detection system that offers an effective solution to the increasing concerns of LPG gas leakage, providing an early warning to prevent accidents, fires, and explosions, and enhancing the safety of h ouseholds and industries.

II. AIM AND OBJECTIVE

A. Aim

To design and implement an LPG gas leakage detection and alert system that enhances the safety of households and indust ries by detecting potential gas hazards and providing an early warning to prevent accidents, fires, and explosions.

DOI: 10.48175/IJARSCT-37012

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 6, Issue 8, June 2026
Impact Factor: 8.2

B. Objective

1. To research and identify the appropriate gas sensors, wireless and GSM technology, and microcontrollers needed to detect LPG gas leakage.
2. To design and develop a gas leak detection system that can detect the presence of LPG gas and trigger an alarm or shut off the gas supply in case of a gas leak.
3. To integrate the gas leak detection system with wireless technology to send an alert in case of gas leakage.
4. To provide an effective solution to address the growing concerns of LPG explosions and their catastrophic consequences, enhancing the safety of households and industries.

III. LITERATURE SURVEY

Literature Review 1: Design and Implementation of an Economic Gas Leakage Detector (Mahalingam B. T., H. Mujawar, and M. S. Kasbe, 2012)

Mahalingam B. T., H. Mujawar, and M. S. Kasbe proposed a cost-effective automatic gas leakage detection and alarming system. The primary objective of the work was to detect Liquefied Petroleum Gas (LPG) leakage in residential and comm ercial premises and provide timely alerts to users. The system was designed to enhance safety by reducing the risk of fire a ccidents and gas-related hazards through early detection and warning mechanisms.

Literature Review 2: GSM Module for Gas Leakage Alert and Cylinder Booking (K. Padma Priya and Ratnesh Prabhaker, 2014)

K. Padma Priya and Ratnesh Prabhaker developed a GSM-based gas leakage monitoring system that sends Short Message Service (SMS) alerts when a gas leak is detected. In addition to notifying users about possible gas leakage, the system incl udes an automatic LPG cylinder booking feature. This functionality enables users to book a refill cylinder through SMS, t hereby improving convenience and ensuring uninterrupted gas supply.

Literature Review 3: MQ-2 Gas Sensor for LPG Detection (Christian and N. Komar, 2013)

Christian and N. Komar presented the application of the MQ-2 gas sensor integrated with the Arduino Duemilanove platfo rm for LPG gas detection. The MQ-2 sensor is capable of detecting gases such as propane and butane, which are the majo r components of LPG. The sensor utilizes a sensitive semiconductor material whose resistance changes in the presence of combustible gases. This feature makes the MQ-2 sensor highly suitable for gas leakage detection systems due to its reliabil ity, low cost, and ease of integration with microcontroller-based platforms.

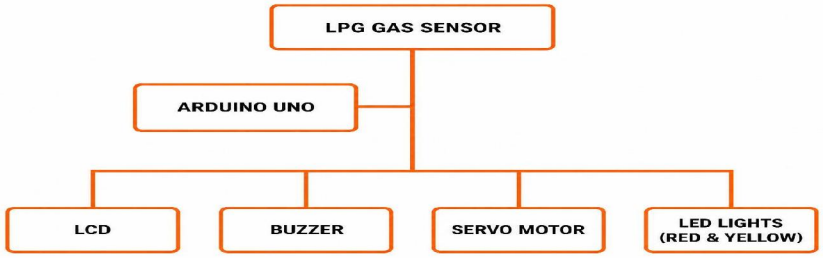
Summary of Literature Review

The reviewed studies demonstrate the importance of gas leakage detection systems in ensuring safety and preventing accid ents. Existing systems utilize gas sensors, alarm mechanisms, and GSM communication modules to provide early warning and remote notification features. However, there is still a need for more intelligent, reliable, and cost-effective gas monitor ing systems with enhanced response capabilities. The proposed Gas Leak Detector aims to address these challenges by int egrating advanced sensing, alerting, and communication technologies for improved safety and efficiency.

IV. PROPOSED METHODOLOGY

In this study it can be described how the tool can work to capture the gas received by the sensor, then the sensor is process ed in an Arduino program that can display data in the LCD, emit sound, and send a short message to the registered mobile number. The scheme can be seen in the block diagram.

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 6, Issue 8, June 2026
Impact Factor: 8.2



1. **Selection of Components:** The first step is to identify and select the required components for the system. This includes an LPG gas sensor, Arduino Uno microcontroller, LCD screen, buzzer.
2. **Circuit Design:** The next step involves designing the circuit for the system. The gas sensor is connected to the Arduino Uno microcontroller, which processes the sensor data and triggers an alarm through the buzzer and LCD screen in case of gas leakage. The GSM module is also connected to the microcontroller to send an alert
3. **Programming:** The third step involves programming the microcontroller. The code is written in the Arduino IDE, which controls the gas sensor, LCD screen, buzzer
4. **System Integration**: The fourth step involves integrating all the components of the system. The gas sensor, microcontrol ler, LCD screen, buzzer, are connected according to the circuit design..
5. **Testing:** The final step involves testing the system to ensure that it is accurate and reliable. The system is tested in a con trolled environment using LPG gas to simulate real-world conditions. The system's performance is evaluated, and any nec essary modifications are made to ensure that it meets the specified requirements and objectives.

Overall, the methodology for designing and implementing an LPG gas leakage detection and alert system involves a syste matic approach that involves component selection, circuit design, programming, system integration, and testing to ensure t hat the system is accurate, reliable, and effective in detecting LPG gas leakage and providing an early warning to prevent c atastrophic consequences.

V. FLOW CHART

The flowchart represents the working of an LPG gas leakage detection and alert system.

The flowchart illustrates the working of a Login Authentication System that verifies user credentials and provides secure access to the system. The process begins when a user attempts to log in.

Initially, the system checks whether the user has exceeded the maximum number of allowed login attempts (five attempts). If the number of attempts reaches five, the account is automatically locked to prevent unauthorized access. Once the account is locked, an alert notification is sent to the user informing them about the security action, and the process ends.

If the user has not exceeded the allowed number of attempts, the system proceeds to the login stage, where the user enters their credentials such as username and password. After receiving the login information, the system verifies whether the entered credentials are authorized.

If the credentials are incorrect or the user is not authorized, the system redirects the user back to the login page, allowing another attempt. This cycle continues until the user either enters valid credentials or reaches the maximum attempt limit.

When the user provides valid credentials, the authorization process is successful, and the system grants access. A "Grant Success" message is displayed, indicating that the login was successful and the user can access the system resources. The process then terminates.

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 6, Issue 8, June 2026
Impact Factor: 8.2

This authentication mechanism enhances system security by preventing unauthorized access, limiting repeated failed login attempts, and notifying users when their accounts are locked due to suspicious activity. Such systems are widely used in banking applications, web portals, mobile applications, and secure information systems to protect sensitive user data and resources.

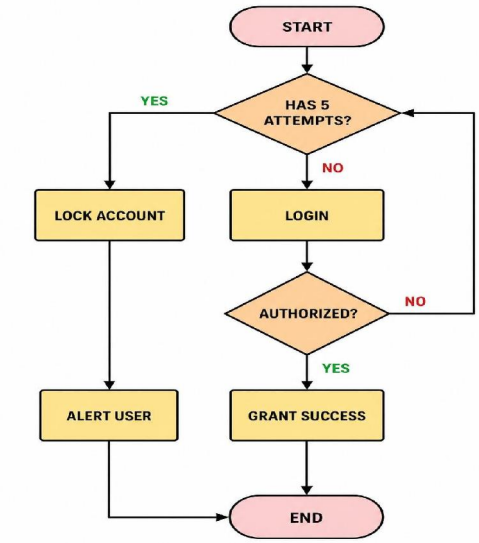


Figure : Flow chart

VI. REQUIREMENT

1. Hardware Used
2. Arduino Uno Microcontroller
3. MQ2 sensor
4. 16*2 LCD module
5. Servo Motor
6. Power supply
7. Buzzer
8. LED light red and yellow

Software Used

1. Arduino Compiler IDE
2. Coding language- JAVA

VII. EXPERIMENTAL RESULTS

The results obtained from the developed LPG Gas Leak Detection System demonstrate its effectiveness in identifying gas leakage and providing timely alerts to users. The system utilizes an MQ-2 gas sensor to continuously monitor the surrounding environment for the presence of LPG gases such as propane and butane. Whenever the gas concentration exceeds the predefined threshold level, the sensor immediately detects the leakage and activates the alarm system.

Experimental observations show that the system can successfully detect LPG gas leaks within a sensing range of approximately 50 cm to 80 cm when installed in a relatively enclosed environment. The alarm mechanism provides an instant warning, enabling users to take preventive actions before the gas concentration reaches a hazardous level. The

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 6, Issue 8, June 2026
Impact Factor: 8.2

system operates reliably and responds quickly to gas leakage conditions, thereby minimizing the risk of fire accidents, explosions, and health hazards.

In addition to the local alarm feature, the system is capable of sending notifications to the owner through communication modules, ensuring that users are informed even when they are away from the premises. This enhances the overall safety and reliability of the system. The integration of sensing, alerting, and communication technologies makes the proposed solution practical for residential, commercial, and industrial applications.

The implementation of this system provides users with a greater sense of safety and comfort. It reduces the possibility of unnoticed gas leakage and offers continuous monitoring of LPG cylinders and gas pipelines. The proposed solution is low-cost, easy to install, and highly effective for real-time gas leakage detection. Therefore, the system successfully achieves its objective of detecting LPG gas leaks and providing immediate alerts and notifications, thereby improving safety and preventing potential accidents.

VIII. CONCLUSION

The LPG gas leakage detection and alert system is an essential tool for enhancing safety in households and industries. LP G gas leakage can cause serious accidents, fires, and explosions, leading to fatalities and significant damage to property. T he proposed system offers a reliable and effective solution to detect potential hazards and provide an early warning to prev ent catastrophic consequences. Various gas sensors, wireless technology, microcontrollers, and an alarm system are used t o detect the presence of LPG gas and trigger an alarm, shut off the gas supply, and send alert in case of gas leakage. The e xperimental results of the system should demonstrate its ability to accurately detect gas leakage, provide an early warning, and minimize damage caused by gas leakage. Hence, the proposed LPG Gas Leak Detection Smart Tool can significantly improve house safety and industrial safety, prevent accidents, and minimize damage caused by gas leakage. Therefore, it i s a valuable and necessary investment for anyone using LPG gas as a fuel source.

REFERENCES

1. “LPG Gas Leakage Detection and Alert System,” International Journal for Research in Applied Science and Engineering Technology (IJRASET). [Online]. Available: https://www.ijraset.com/research-paper/lpg-gas-leakage-detection-and-alert-system. Accessed: Jul. 2025.
2. P. P. Bairagi, B. Patir, P. Bora, L. Deka, and S. K. Rajbongshi, “SmartGuard: An Intelligent LPG Leakage Detection and Control System,” International Journal of Engineering Trends and Technology (IJETT), vol. 72, no. 9, pp. 265–272, 2024, doi: 10.14445/22315381/IJETT-V72I9P121.
3. S. T. Apeh, K. B. Erameh, and U. Iruansi, “Design and Development of Kitchen Gas Leakage Detection and Automatic Gas Shut-Off System,” Journal of Emerging Trends in Engineering and Applied Sciences (JETEAS), vol. 5, no. 3, pp. 222–228, 2014.
4. N. Nazism and M. Taib, Appraisal of Fire Safety Management Systems at Educational Buildings. EDP Sciences, 2014.
5. S. T. Apeh, K. B. Erameh, and U. Iruansi, “Design and Development of Kitchen Gas Leakage Detection and Automatic Gas Shut-Off System,” Journal of Emerging Trends in Engineering and Applied Sciences (JETEAS), vol. 5, no. 3, pp. 222–228, 2014.
6. K. P. A. Alcala, J. C. Alcance, M. T. Eclavea, and A. S. Landicho, “A Sensor-Based Gas Leakage Detection System for Kitchen Safety Using Arduino Uno R3,” in Information Technology: Cross-Platform Application and Development, M.
7. G. Flores, Ed. Institute of Industry and Academic Research Incorporated, 2025, pp. 265–289, doi: 10.53378/10.25.009.

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 6, Issue 8, June 2026
Impact Factor: 8.2

8. K. A. Emmanuel, S. K. Tulashie, A. Joe-Steve, and I. Yeboah, "Trend of Fire Outbreaks in Ghana and Ways to Prevent These," 2016.
9. P. K. Padma, M. Surekha, R. Preethi, T. Devika, and N. Dhivya, "Smart Gas Cylinder Using Embedded System," International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering, vol. 2, 2014.
10. T. Soundarya, J. V. Anchitaalagammai, P. G. Deepa, and K. S. Sheela, "Efficient Energy (LPG) Gas Leakage Detection and Prevention System for Home Safety," Artificial Intelligence Systems and Machine Learning, vol. 6, no. 1, 2014.
11. G. Rahul, M. Shubham, K. Salman, G. Raghunandan, and J. Rahul, "GSM-Based Gas Leakage Detection System," International Journal of Advance Research in Science and Engineering, vol. 7, 2018.
12. K. Murugan, "Intelligent Gas Booking and Leakage System Using Wireless Sensor Networks," 3C Tecnología: Glosas de Innovación Aplicadas a la Pyme, Special Issue, Mar. 2020.
13. 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
14. Kazi Kutubuddin Sayyad Liyakat Saheb, Significance of rotation and projection of image in Child Healthcare System', Gradiva Review Journal, Volume 3 Issue 1 2017, pp. 51-55. Available at: https://gradivareview.net/wp-content/uploads/2026/06/9.GRJ8948.pdf
15. 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
16. N. R. Mulla and K. K. S. Liyakat, (2025). Pipeline Pressure and Flow Rate Monitoring Using IoT Sensors and ML Algorithms to Detect Leakages, Int. J. Artif. Intell. Mech. Eng., vol. 1, no. 1, pp. 20–30, Jun. 2025.
17. Nikat Rajak Mulla, (2025). Sensor-based Aircraft Wings Design Using Airflow Analysis, International Journal of Image Processing and Smart Sensors, vol. 1, no. 1, pp. 55-65, Jun. 2025.
18. N. R. Mulla and K. K. S. Liyakat, (2025). A Study on Machine Learning for Metal Processing: A New Future, International Journal of Machine Design and Technology, vol. 1, no. 1, pp. 56–69, Jun. 2025.
19. N. R. Mulla, and K. K. S. Liyakat, "Node MCU and IoT Centered Smart Logistics," International Journal of Emerging IoT Technologies in Smart Electronics and Communication, vol. 1, no. 1, pp. 20-36, Jun-2025.
20. Renuka Dnyanoba Todakar, Jadhav Vaibhavi Kishor. (2025). Kinetic Power Gyms for Revolutionizing Fitness. Journal of Telecommunication, Switching Systems and Networks. 2025; 12(02):13-21. Available from: https://journals.stmjournals.com/jotssn/article=2025/view=214971
21. Kazi Kutubuddin Sayyad Liyakat. Cardiovascular Modeling with Computational and Mathematical Methods. Research & Reviews: A Journal of Bioinformatics. 2025; 12(2): 1–11p.
22. Nikat Rajak Mulla, Kazi Kutubuddin Sayyad Liyakat. Air Flow Analysis in Sensor-Based Aircraft Wings Design. Recent Trends in Fluid Mechanics. 2025; 12(2): 29– 39p.
23. Nikat Rajak Mulla, Kazi Kutubuddin Sayyad Liyakat. IoT Sensors To Monitor Pipeline Pressure and Flow Rate Combined with Ml-Algorithms to Detect Leakages. Recent Trends in Fluid Mechanics. 2025; 12(2): 40–48p.
24. Heena Rafiq Shaik, Kazi Kutubuddin Sayyad Liyakat. Juncture of Nanotechnology and IoT: Novel Era of Connectivity. Nano Trends – A Journal of Nano Technology & Its Applications. 2025; 27(03):-. Available from: https://journals.stmjournals.com/nts/article=2025/view=212921
25. Kazi Kutubuddin Sayyad Liyakat. Machine Learning Revolutionizing Server Management and Performance. Journal of Computer Technology & Applications. 2025; 16(02):-. Available from: https://journals.stmjournals.com/jocta/article=2025/view=0

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 6, Issue 8, June 2026
Impact Factor: 8.2

26. Kazi Kutubuddin Sayyad Liyakat. KVS Approach for IoT Network Security: A Novel Approach to IoT Network Security With B-Cell Inspired Models. Journal of Network security. 2025; 13(02):16-25. Available from: https://journals.stmjournals.com/jons/article=2025/view=207920
27. Dr. Kazi Kutubuddin Sayyad Liyakat. Nanotechnology: Effective Pesticide Solutions for Jawar Leaf Diseases. Journal of Nanoscience, NanoEngineering & Applications. 2025; 15(02):-. Available from: https://journals.stmjournals.com/jonsnea/article=2025/view=204242
28. Parkhe Suyash Swaminath, Dhyavarkonda Udaykiran Tulshidas, Todkar Renuka Dnyanoba, Pawar Radhika Maruti, Kazi Kutubuddin Sayyad Liyakat. Nanotechnology in Internet of Things: A Powerful Partnership Shaping the Future. Journal of Nanoscience, NanoEngineering & Applications. 2025; 15(02):-. Available from: https://journals.stmjournals.com/jonsnea/article=2025/view=211534
29. Nikat Rajak Mulla, Kazi Kutubuddin Sayyad Liyakat. Nano-Materials in Vaccine Formation and Chemical Formulae's for Vaccination. Journal of Nanoscience, NanoEngineering & Applications. 2025; 15(03):-. Available from: https://journals.stmjournals.com/jonsnea/article=2025/view=216526
30. A. K. Mulani, H. T. Shaikh, and K. K. S. Liyakat, (2025). Nuclear Power Generation Using UO2 Materials, Journal of Advance Electrical Engineering and Devices, Vol. 3, No. 2, pp. 27-40, Jul. 2025.
31. H. T. Shaikh and K. K. S. Liyakat, "Empowering the IoT: The Study on Role of Wireless Charging Technologies," Journal of Control and Instrumentation Engineering, vol. 11, no. 2, pp. 29-39, Jul. 2025.
32. H. T. Shaikh, and K. K. S. Liyakat, "Pre-Detection Systems Transfiguring Intoxication and Smoking Using Sensor and AI," Journal of Instrumentation and Innovation Sciences, vol. 10, no. 2, pp. 19-31, Jul. 2025.
33. Vaishnavi Ashok Desai, (2025). AI and Sensor Systems Revolutionizing Intoxication and Smoking Pre-Detection. Journal of Control & Instrumentation. 2025; 16(3): 15–26p.
34. Heena Tajoddin Shaikh. (2025). The Future of Coastal Resilience: Harnessing Satellite Technology. Advance Research in Communication Engineering and Its Innovations, 28–36. Retrieved from https://matjournals.net/engineering/index.php/ARCEI/article/view/2281
35. H. T. Shaikh and K. K. S. Liyakat., (2025). Sensor- based Intelligent Wearable Glasses, Journal of Digital Circuitry Innovations in Electrical Devices, vol. 1, no. 2, pp. 16-24, Jul. 2025.
36. Kazi Kutubuddin Sayyad Liyakat. Nanorobots: The Fight against Cholesterol. Nano Trends – A Journal of Nano Technology & Its Applications. 2025; 27(02). Available from: https://journals.stmjournals.com/nts/article=2025/view=205244
37. H. T. Shaikh and K. K. S. Liyakat, "Millimetre Wave: A Study on the Backbone of Future IoT Connectivity", Advance Research in Analog and Digital Communications, Vol. 2, no. 2, pp. 20-31, Aug. 2025.
38. Ayesha Khalil Mulani. Microwave Signals: A New Frontier in Non-Invasive Medical Diagnostics: A Study. Journal of Microwave Engineering & Technologies. 2025; 12(3): 27–41p.
39. Ayesha Khalil Mulani. Revolutionizing Optical Fibre Field Distribution with Linear Finite Element Method. Trends in Opto-electro & Optical Communication. 2025; 15(3): 31-41p.
40. H. T. Shaikh and K. K. S. Liyakat, (2025). Robust Access Control Mechanisms in IoT Security using VHDL Programming, Journal of VLSI Design and Signal Processing, vol. 11, no. 2, pp. 31-40, Aug. 2025. Available at: https://matjournals.net/engineering/index.php/JOVDSP/article/view/2351
41. Radhika Maruti Pawar, Kulkarni Amarja Bhaskar, Patu Shradha Gangadhar, Sensors and Artificial Intelligence based Intelligent Thermos. Recent Trends in Sensor Research & Technology. 2025; 12(3): 37–45p.
42. Ayesha Khalil Mulani. Optical Fibre Pressure Sensor in Medicine: A Study. Recent Trends in Sensor Research & Technology. 2025; 12(3): 18–27p.
43. Vaishnavi Ashok Desai, Heena Tajoddin Shaikh, Sensor and AI Based Pre- Detection Systems Transfiguring Intoxication & Smoking. Journal of Telecommunication, Switching Systems and Networks. 2025; 12(3): 37–50p.

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 6, Issue 8, June 2026
Impact Factor: 8.2

44. C. M. Abhangrao and K. K. S. Liyakat, "A study on hybrid intelligence in COBOT," Journal of Mechanical Robotics, vol. 10, no. 2, pp. 15–29, Sep. 2025.
45. Heena Tajoddin Shaikh, (2025). The Future of Cancer Management: A Guide to Nanosensor Applications. Recent Trends in Semiconductor and Sensor Technology, 1–10.
46. Heena T Shaikh. A Study on Automatic Feedback Control by Image Processing for Mixing Solutions in a Microfluidic Device. International Journal of Advanced Control and System Engineering. 2025; 3(2): 32–41p.
47. Heena T Shaikh. A Study on Unmanned Air Vehicles (UAV). Journal of Aerospace Engineering & Technology. 2025; 15(3): 14–27p.
48. K. K. S. Liyakat, "Waste-to-Energy (WtE) Plants: A Study," Journal of Alternative and Renewable Energy Sources, vol. 11, no. 3, pp. 1-15, Oct. 2025.
49. Sultanabanu Sayyad Liyakat. (2024). Advancing IoT Connectivity through Very Large-Scale Integration of Semiconductor Technology. Journal of Semiconductor Devices and Circuits. 2024; 11(03):54-63. Available at: https://journals.stmjournals.com/josdc/article=2024/view=190467/
50. 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=0
51. Dr. Kazi Kutubuddin Sayyad Liyakat. KSK Approach to Smart Agriculture: Utilizing AI-Driven Internet of Things (AI IoT). Journal of Microcontroller Engineering and Applications. 2024; 11(03): 41-50. Available from: https://journals.stmjournals.com/jomea/article=2024/view=0
52. Pathan Muskan Ibrahim.(2025). Photochemical Materials for Light-Responsive Optical Switching: AI-Optimized Design of Dynamic Visual Effects. International Journal of Photochemistry and Photochemical Research, Volume 3, Issue 2. 2025; 3(2): 13–27p.
53. Shaikh A. Hakim A. Razzaque. (2025). A Study on AI-Enhanced Environmental Toxicology: Sensor-Driven Predictive Framework. Research & Reviews: A Journal of Toxicology. 2025; 15(3): 1–20p.
54. Paul Pranit Sunil, Dhyvarkonda Udaykiran Tulshidas, Gone Yashasvi Prakash. (2025). AI-Powered Motorcycle Anti-Theft and Safety System, International Journal of Advanced Research in Science, Communication and Technology, Volume 5, Issue 1, October 2025. pp. 445- 454.
55. P. M. Ibrahim and K. K. S. Liyakat, "Guardian Angel: An Innovative Mobile Application for Rapid Accident Notification and Emergency Response," Advance Research in Analog and Digital Communications, vol. 2, no. 3, pp. 7-20, Oct. 2025.
56. Muskan Ibrahim, Shaikh A. Hakim A. Razzaque, Heena T Shaikh, Kazi. (2025). VHDL-Based Strategies for Protecting IoT Devices from Power and Electromagnetic Side-Channel Attacks: A Study. Recent Trends in Electronics & Communication Systems. 2025; 12(3): 30–40p. Available at: https://journals.stmjournals.com/article/article=2025/view=234151/
57. Amar Parmeshwar Bansode, (2025). Electronics and Communication Design of an AI-Powered Smart Chair for Real-Time Multilingual Interaction. Recent Trends in Electronics & Communication Systems. 2025; 12(3): 16–29p.
58. Pathan Muskan Ibrahim, Shaikh A. Hakim A. Razzaque, Heena T Shaikh, Kazi Kutubuddin Sayyad Liyakat. (2025). Reimagining Nuclear Reactor Safety: The Study toward Passive Safety. Journal of Nuclear Engineering & Technology. 2025; 15(3): 6–15p.
59. Ayesha Khalil Mulani, Heena Tajuddin Shaikh. (2025). Nuclear Reactor Safety Using Fuel Pallet: A Study. Journal of Nuclear Engineering & Technology. 2025; 15(3): 16–23p.
60. Sunil Mishra and Liyakat, (2025). Sensors in Metallurgy Applications: A Study, Journal of Recent Activities in Production, vol. 10, no. 2, pp. 11-22, Oct. 2025. Available at: https://matjournals.net/engineering/index.php/JoRAP/article/view/2576

61. Muskan Pathan. (2025). Study of Agriculture Using Drones in India: Evaluation of Feasibility, Impact, and Adoption Challenges. International. Journal on Drones. 2025; 1(2): 21–33p. Available at: https://journals.stmjournals.com/ijd/article=2025/view=230379/
62. Kazi Kutubuddin Sayyad Liyakat. (2025). A Study on Recent Trends in Chemical Sensors for Detecting Toxic Materials. Journal of Modern Chemistry & Chemical Technology. 2025; 16(3): 25–34p. Available at: https://journals.stmjournals.com/jomcct/article=2025/view=234528/
63. Heena T Shaikh. (2025). E-Commerce Study Using AR/VR and Ethical Convergence of Commerce. E-Commerce for Future & Trends. 2025; 12(3): 20–26p. Available at: https://journals.stmjournals.com/ecft/article=2025/view=232592/
64. Nikat Rajak Mulla, Bhakti Haridas Gavali, Ayesha Khalil Mulani, Vaibhavi Kishor Jadhav, (2025). Nanotechnology: Revolutionizing the World of Sensors. International Journal of Applied Nanotechnology. 2025; 11(2): 1–9p. Available at: https://journalspub.com/publication/ijan/article=21245/
65. Liyakat, (2025). Revolutionizing Petrology and Mineralogy: The Study of AI and Advanced Sensor Technologies. International Journal of Mineral. 2025; 2(2): 1–11p. Available at: https://journals.stmjournals.com/ijmi/article=2025/view=232613/
66. Sayyad & Liyakat (2025). AR Coatings in Solar Efficiency: A Study. Journal of Thin Films, Coating Science Technology and Application. 2025; 12(3): 25–34p. Available at: https://journals.stmjournals.com/article/article=2025/view=235156/
67. Sanika Anil Bhosale, (2025). AI-Based Software-Defined Satellite in Decision Making: A Study. International Journal of Satellite Remote Sensing. 2025; 03(01):63-72. Available from: https://journals.stmjournals.com/ijsrs/article=2025/view=207998.
68. Heena T. Shaikh. (2025). A Study on Insect Journey Using Sensor. International Journal of Insects. 2025; 2(2): 1–7p. Available at: https://journals.stmjournals.com/article/article=2025/view=234932/
69. Bhagyarekha Ujjwalganesh Dhaware, (2025). A Smart Stove System for Cooking Food: A Study. International Journal of Electrical Machine Analysis and Design. 2025; 3(2): 1–10p. Available at: https://journals.stmjournals.com/article/article=2025/view=235595/
70. Milind Shivaji Kadam, (2025). Power of Optical Sensors in Remote Sensing: A Study. International Journal of Satellite Remote Sensing, 2025; 3(2): 29–36p. Available at: https://journals.stmjournals.com/article/article=2025/view=235438/
71. IR. (2025). A Study of Optical Sensor in Clinical applications. International Journal of Optical Innovations & Research. 2025; 3(2): 1–7p. Available at: https://journals.stmjournals.com/article/article=2025/view=235439/
72. Muskan Pathan, (2026). Exploring the Intersection of Blockchain and Cybersecurity. Current Trends in Information Technology. 2026; 16(1): 32–42p.
73. Shaikh Heena T, Kazi Kutubuddin Sayyad Liyakat. (2025). Satellite Sensing in Aero-Plan Guidance and Radar Tracking System. International Journal of Satellite Remote Sensing. 2025; 3(2): 1–9p. Available at: https://journals.stmjournals.com/issue/ijwsn-volume-03-Issue-02-2025/
74. K. K. S. Liyakat, (2025). AI-driven Convergent Channel Allocation for 7G Mobile Networks: A Study, Journal of RF and Microwave Communication Technologies, vol. 2, no. 3, pp. 19-30, Dec. 2025. Available at: https://matjournals.net/engineering/index.php/JoRFMCT/article/view/2825
75. Ayesha Khalil Mulani, Kazi Kutubuddin Sayyad Liyakat. (2025). Transforming IoT with mmWave: A Study. International Journal of Microwave Engineering and Technology. 2025; 11(2): 1–9p.
76. Nikat R. Mulla, Kazi Kutubuddin Sayyad Liyakat. (2025). Predictive Maintenance of 6G Infrastructure Using Artificial Intelligence. International Journal of Telecommunication and Emerging Technologies. 2025; 11(2): 1–10p. Available at:

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 6, Issue 8, June 2026
Impact Factor: 8.2

77. Heena T Shaikh, Kazi Kutubuddin Sayyad Liyakat. (2025). Symmetry Principles in Digital Twin Systems: Modeling, Integration, and Applications. Emerging Trends in Symmetry. 01(02):06-24p. Available from: https://journals.stmjournals.com/etsy/article=2025/view=233711
78. Kazi Kutubuddin Sayyad Liyakat. (2025). Cloud Computing-Based Software Testing. International Journal of Software Computing and Testing. 11(2): 17–25p.
79. Mayur Saudagar Jadhav, and Kazi Kutubuddin Sayyad Liyakat. (2025). Smart Cameras Integrated With Artificial Intelligence (AI) and Human Pose Estimation: A Study. International Journal of AI and Machine Learning Innovations in Electronics and Communication Technology, 1(2): 1–12. Accessed December 13, 2025. https://matjournals.net/engineering/index.php/IJAIMLECT/article/view/2424.
80. Nikat Rajak Mulla. (2025). A Transformative Approach to Empathetic Climate Change by Satellite Sensing. Research & Reviews : Journal of Space Science & Technology. 2025; 14(03):35-42. Available from: https://journals.stmjournals.com/rrjosst/article=2025/view=228204
81. Kazi Kutubuddin Sayyad Liyakat, Efficiency Improvements in Long-Distance Wireless Power Transmission. International Journal of Electrical Power System and Technology. 2024; 10(01): -p. Available from: https://journalspub.com/publication/ijepst/article=11880
82. Mulla Nikat, Kazi Kutubuddin. Securing IoT Wilderness with VHDL. International Journal of VLSI Circuit Design & Technology. 2025; 03(01):29-40. Available from: https://journals.stmjournals.com/ijvcdt/article=2025/view=206696
83. Nikat Rajak Mulla, Kazi Kutubuddin Sayyad Liyakat. GSM Based Intelligent Homes. International Journal of Electrical and Communication Engineering Technology. 2025; 03(02):-. Available from: https://journals.stmjournals.com/ijecet/article=2025/view=229260
84. Kazi Kutubuddin Sayyad Liyakat. (2022). Text Analysis in Health Care Study Using IoT, Journal of Computer Technology & Applications, Vol 13, No 3. Available at: https://computerjournals.stmjournals.in/index.php/JoCTA/article/view/955.
85. Kazi Kutubuddin Sayyad Liyakat. Enhancing LAN Security Using Machine Learning. International Journal of Wireless Security and Networks. 2025; 03(02):07-16. Available from: https://journals.stmjournals.com/ijwsn/article=2025/view=232814
86. Kazi Kutubuddin Sayyad Liyakat. (2024). Smart Agriculture based on AI-Driven-IoT (AIIoT): A KSK Approach. Advance Research in Communication Engineering and Its Innovations, 23–32. Retrieved from https://matjournals.net/engineering/index.php/ARCEI/article/view/746
87. Heena Tajoddin Shaikh. (2025). A Study on Innovations in Primary Containment Technology for Safer Nuclear Power. Journal of Nuclear Engineering & Technology. 2025; 15(03):-. Available from: https://journals.stmjournals.com/jonet/article=2025/view=233190
88. Kazi Kutubuddin Sayyad Liyakat. (2025) Tiny Titans: The Promise of E-Nanorobots in the Fight against Cancer. Journal of Advancements in Robotics. 2025; 12(02):11-21. Available from: https://journals.stmjournals.com/joarb/article=2025/view=0
89. Nikat Rajak Mulla. (2025) Analysis of Field Distribution in Optical Fibre Using FEM Method. Trends in Opto-electro & Optical Communication. 2025; 15(02):31-40. Available from: https://journals.stmjournals.com/toeoc/article=2025/view=215300
90. Nikat Rajak Mulla. (2025). Internet of Things Connectivity Using Millimetre Wave: A Study. Journal of Microwave Engineering and Technologies. 2025; 12(02):18-30. Available from: https://journals.stmjournals.com/jomet/article=2025/view=215480
91. Kazi Kutubuddin Sayyad Liyakat. (2025). Fog Computing Architecture and Deployment in IoT. International Journal of Distributed Computing and Technology. 2025; 11(2): 1–9p.

92. Heena T. Shaikh, Kazi Kutubuddin Sayyad Liyakat. (2025). Improved Programming Model Using AI: Shifting from Imperative Coding to Declarative Intent. International Journal of Software Computing and Testing. 11(2): 1–9p. Available at: https://journalspub.com/publication/ijsct/article=22151/
93. Heena Kazi. (2025) Collaborative Approaches in Using Satellite Data for Climate Action: A study. International Journal of Atmosphere. 2(2): 1–9p. Available at: https://journals.stmjournals.com/article/article=2025/view=234886/
94. Shaikh Heena T, Kazi Kutubuddin Sayyad Liyakat. (2025). The Versatility of the IC 741 in Electronic Sensor System Design. International Journal of Analog Integrated Circuits. 2025; 11(2): 8–13p. Available at: https://journalspub.com/publication/ijaic/article=23144/
95. Kazi Kutubuddin Sayyad Liyakat. (2025) Navigating the Antenna Frontier for Emerging IoT Technologies. International Journal of VLSI Circuit Design & Technology. 2025; 3(2): 1–10p. Available at: https://journals.stmjournals.com/ijvcdt/article=2025/view=235614
96. K. K. S. Liyakat, (2205). A Study on Side-Channel Attack Countermeasures in IoT Security using VHDL Programming, Journal of VLSI Design and Signal Processing, vol. 11, no. 3, pp. 27-36, Dec. 2025. Available at: https://matjournals.net/engineering/index.php/JOVDSP/article/view/2897
97. Kazi Kutubuddin Sayyad Liyakat. (2025). Hybrid Intelligence (HI) in Cyber Security: A Study. International Journal of Wireless Security and Networks. 2026; 4(1): 1–9p.
98. Kazi Kutubuddin Sayyad Liyakat, Heena T.Shaikh, Kazi Sultanabanu Sayyad Liyakat. (2025). Cloud Security Using Machine Learning: A Study. International Journal of Distributed Computing and Technology. 2025; 11(2): 1–10p. Available at: https://journalspub.com/publication/ijdct/article=22139
99. H. T. Shaikh, and K. K. S. Liyakat, (2025). The Future of Radar Antenna Design: A Study, Advance Research in Communication Engineering and its Innovations, vol. 2, no. 3, pp. 18-28, Dec. 2025. Available at: https://matjournals.net/engineering/index.php/ARCEI/article/view/2913
100. Heena T. Shaikh, Kazi Kutubuddin Sayyad Liyakat. (2025). 4 x 4 Multi-Band MIMO Antenna: A Study. International Journal of Microwave Engineering & Technology. 2025; 11(2): 1–11p.
101. Heena T. Shaikh, Pathan M. Ibrahim, Kazi K. S. Liyakat. (2025). A Study on the Future of Industrial Wastewater Treatment Plant: Trends and Innovations. International Journal of Chemical Engineering and Processing. 2025; 11(2): 1–13p. Available at: https://journalspub.com/publication/ijocep/article=22386/
102. Kazi Kutubuddin Sayyad Liyakat, Heena T. Shaikh. (2025). e-Kidney Filtration System (EKS) Using Sensor: A Study. International Journal of Chemical Separation Technology. 2025; 11(2): 1–10p.
103. Kazi Kutubuddin Sayyad Liyakat.(2025). Building a Secure IoT Ecosystem with TRNGs and VHDL. Journal of Telecommunication and Emerging Technologies. 2025; 11(2): 1–8p.
104. Milind Shivaji Kadam, Vaishnavi Gopal Shirsikar, N. N. Shaikh, Aditi Dinanath Shahane, Kazi Kutubuddin Sayyad Liyakat. (2025). A Study in Leveraging Deep Learning and IoT Arrays for Dynamic, Hyper-Local Atmospheric Intelligence. International Journal of Atmosphere. 2025; 2(2): 50–62p. Available at: https://journals.stmjournals.com/article/article=2025/view=234909/
105. Shaikh Heena Tajoddin, Ir. Kazi Kutubuddin Sayyad Liyakat. (2025). Carbon-Based Supercapacitors Evolutionizing EVs. Journal of Materials & Metallurgical Engineering. 2025; 15(3): 66–76p. Available at: https://journals.stmjournals.com/article/article=2025/view=235071/
106. Kazi Kutubuddin Sayyad Liyakat. (2025). Epidemiology and Transmission of Infectious Diseases Study Using Machine Learning. International Journal of Pathogens. 2025; 2(2): 10–20p. Available at: https://journals.stmjournals.com/article/article=2025/view=234948/
107. Sultanabanu, Shaikh Heena T. (2025). A Study on IoT and AI for Predictive Modeling and Control of Infectious Disease Transmission. International Journal of Pathogens. 2025; 2(2): 1–9p. Available at: https://journals.stmjournals.com/article/article=2025/view=234953/

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 6, Issue 8, June 2026 Impact Factor: 8.2

108. K Kazi, Sayyad Liyakat, (2025). VHDL Programming for Secure Bootloaders in IoT Security. International Journal of VLSI Circuit Design & Technology. 2025; 03(01):19-28. Available from: https://journals.stmjournals.com/ijvcdt/article=2025/view=206693
109. Jadhav Vaibhavi Kishor. (2025). Robust Access Control Mechanisms Using VHDL Programming for IoT Security. Journal of VLSI Design Tools and Technology. 2025; 15(02):6-19. Available from: https://journals.stmjournals.com/jovdtt/article=2025/view=224414
110. Heena T Shaikh and Dr. Kazi Kutubuddin Sayyad Liyakat, Innovating IoT Security: VHDL as a Solution for Bootloader Vulnerabilities. International Journal of Microelectronics and Digital integrated circuits. 2025; 11(02): -p. Available from: https://journalspub.com/publication/ijmdic/article=23170/
111. Heena T Shaikh, IR. Kazi Kutubuddin Sayyad Liyakat. (2026). Multi-Layered AI-Driven Security in Wireless Ecosystems. International Journal of Wireless Security and Networks. 2026; 4(1): 21–28p.
112. Dr. Kazi Kutubuddin Sayyad Liyakat. Integrated, Geospatial Risk Assessment of Air, Water, and Soil Pollution Impacts on Agricultural Sustainability using Advanced Digital Technologies. International Journal of Environmental Noise and Pollution Control. 2025; 03(02):28-37. Available from: https://journals.stmjournals.com/ijenpc/article=2025/view=230868
113. IR. Dr. Kazi Kutubuddin Sayyad Liyakat, Heena T Shaikh. Study on Antibiotic Resistance: An Analysis of Molecular Mechanisms and Therapeutic Implications. International Journal of Antibiotics. 2026; 3(1): 9-21p.
114. V. Maske, S. Pauskar, V. Gundagi, S. H. T, and K. K. S. Liyakat, "Two-Way Tracking System for Buses Augmented by Intelligent Sensor and VLSI Technology: A Study," Journal of VLSI Design and Signal Processing, vol. 12, no. 1, pp. 14-27, Jan. 2026. Available at: https://matjournals.net/engineering/index.php/JOVDSP/article/view/3038
115. Kazi Kutubuddin Sayyad Liyakat. Study on Accelerating Threat of Emerging Infectious Diseases (EIDs) and Imperative for a Proactive, Interdisciplinary Global Health Security Framework. International Journal of Tropical Medicines. 2026; 3(1): 9–22p.
116. Heena T. Shaikh, Kazi Kutubuddin Sayyad Liyakat. (2026). A Study on Precision Blood Propulsion in Motor-Driven Artificial Hearts. Trends in Electrical Engineering. 2026; 16(1): 51–57p.
117. Kazi Kutubuddin Sayyad Liyakat, Heena T Shaikh. (2026). Multi-Layered AI-Driven Paradigm Shift in IoT Ecosystem Security. Journal of Communication Engineering & Systems. 2026; 16(1): 13–21p.
118. Heena T. Shaikh, Kazi Kutubuddin Sayyad Liyakat. Analysis of Machine Learning in Metal Processing: A Novel Prospect. Journal of Materials & Metallurgical Engineering. 2026; 16(1): 40–51p.
119. H. T. Shaikh and K. K. S. Liyakat, "A Study into Accurate Blood Pumping in Motor-powered Artificial Hearts," Advance Research in Power Electronics and Devices, vol. 3, no. 1, pp. 1-9, Feb. 2026.
120. Kazi Kutubuddin Sayyad Liyakat. A Technical Survey on Nanotechnology in Nanorobots. Journal of Nanoscience, Nanoengineering & Applications. 2026; 16(1): 14–21p. Available at: https://journals.stmjournals.com/article/article=2026/view=239242/
121. Vaishnavi Gopal Shirsikar, Aditi Dinanath Shahane, Kazi Kutubuddin Sayyad Liyakat. A Study on Securing the Local Area Network with the Immutable Trust of Blockchain. International Journal of Distributed Computing and Technology. 2026; 12(1): 23–33p.
122. Heena T. Shaikh, (2026). A Study on Controlling Artificial Heart. Journal of Control & Instrumentation. 2026; 17(1): 14–23p.
123. H. T. Shaikh, and K. K. S. Liyakat, —A Study on AI-powered Ultra-low Latency in 6G: A Blueprint for the Next-Generation Mobile Communication System‖, Advance Research in Communication Engineering and its Innovations, vol. 3, no. 1, pp. 29-41, Mar. 2026.
124. Dhyvarkonda Udaykiran Tulshidas, Pranit Sunil Paul, Gone Yashasvi Prakash, IR. Kazi Kutubuddin Sayyad Liyakat. Revolutionizing School Schedules: An Arduino-Based Automatic Class Bell System with Real-Time

Precision. Journal of Control & Instrumentation. 2025; 16(02):35-44. Available from: https://journals.stmjournals.com/joci/article=2025/view=213292

125. Kazi Kutubuddin Sayyad Liyakat. (2026). T-Flip-Flop Implementation using Quantum-dot Cellular Automata. Journal of Electronics Design and Technology, 24–32. Retrieved from https://matjournals.net/engineering/index.php/JEDT/article/view/3282
126. Heena T. Shaikh, Kazi Kutubuddin Sayyad Liyakat. Thin Film Technology in Sensor Manufacturing – A Technical Discussion. Journal of Thin Films, Coating Science Technology and Application. 2026; 13(1): 48–58p.
127. Heena T Shaikh, Dr. Kazi Kutubuddin Sayyad Liyakat. A study on CMOS Operational Amplifier in Sensor Development. Journal of VLSI Design Tools and Technology. 2026; 16(01):-. Available from: https://journals.stmjournals.com/jovdtt/article=2026/view=238929
128. Heena T. Shaikh, IR. Kazi Kutubuddin Sayyad Liyakat. An Overview on Energy Harvesting Using Piezoelectric Material for Wi-Fi Systems. International Journal of Electro-Mechanics and Material Behavior. 2026; 4(1): 56– 63p.
129. K. K. S. Liyakat, T-Flip-Flop Implementation using Quantum-dot Cellular Automata ‖ , Journal of Electronics Design and Technology, vol. 3, no. 1, pp. 24-32, Mar. 2026.
130. H. T. Shaikh and K. K. S. Liyakat, "An Overview of Transforming IoT with Millimeter-Wave," Journal of RF and Microwave Communication Technologies, vol. 3, no. 1, pp. 18-28, Mar. 2026. Available at: https://www.matjournals.net/engineering/index.php/JoRFMCT/article/view/3327
131. Kutubuddin Sayyad Liyakat Kazi, (2025). Roll of AI and Sensor in Aerospace: A Study, Journal of Advance Research in Aeronautics and Space Science, Vol. 12 No. 3&4. Available at: https://adrjournalshouse.com/index.php/Jof-aeronautics-space-science/article/view/2589
132. Heena T. Shaikh, Kazi Kutubuddin Sayyad Liyakat. The Future of Farming with IoT-Operated Drones. International Journal on Drones. 2026; 2(1): 20–26p. Available at: https://journals.stmjournals.com/article/article=2026/view=239864/
133. Kazi Kutubuddin Sayyad Liyakat. An Overview on Quantum dot Technology in Temperature Sensor Design. Journal of Electronic Design Technology. 2026; 17(1): 10–17p.
134. Shaikh Heena T, Kazi Kutubuddin Sayyad Liyakat. Sensors-Based Electric Machine Design for Industry. International Journal of Electrical Machine Analysis and Design. 2026; 4(1): 1-10p. Available at: https://journals.stmjournals.com/article/article=2026/view=240174/
135. Heena T Shaikh, Kazi Kutubuddin Sayyad Liyakat. An Overview on Intelligent Operating Systems (iOS). Journal of Operating Systems Development & Trends. 2026; 13(1): 21–28p. Available at: https://journals.stmjournals.com/article/article=2026/view=242357/
136. Kazi Kutubuddin Sayyad Liyakat, A Study of Self-Healing Polymer Nanocomposites with Filler Effect. International Journal of Applied Nanotechnology. 2026; 12(1): 26-35p. Available from: https://journalspub.com/publication/uncategorized/article=24828
137. H.T. Shaikh, and K. K. S. Liyakat, ―A Study on AI-driven Security Concerns in the Wireless Ecosystem, Research & Review: Electronics and Communication Engineering, vol. 3, no. 1, pp. 27-38, Apr. 2026.
138. Heena T. Shaikh, Kazi Kutubuddin Sayyad Liyakat. Optimization of Pesticide Requirement Calculations for IoT- Operated Hexacopter Delivery Systems. International Journal on Drones. 2026; 2(1): 8–14p. Available at: https://journals.stmjournals.com/ijd/article=2026/view=239857/
139. Heena T. Shaikh, & Kazi Kutubuddin Sayyad Liyakat. (2026). A Study on AI-driven Security Concerns in the Wireless Ecosystem. Research & Review: Electronics and Communication Engineering, 27–38. Retrieved from https://matjournals.net/engineering/index.php/RRECE/article/view/3446
140. Kazi Kutubuddin Sayyad Liyakat. Nano-Chemical Revolution in Vaccinology: A Study. Research & Reviews: A Journal of Immunology. 2026; 16(1): 26–38p.

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 6, Issue 8, June 2026 Impact Factor: 8.2

141. Chopade Mallikarjun Abhangrao1, IR. Kazi Kutubuddin Sayyad Liyakat. KSK Approach: An AI-Driven IoT Based Decision Making System's Study. Current Trends in Signal Processing. 2025; 15(02):14-25. Available from: https://journals.stmjournals.com/ctsp/article=2025/view=215216
142. Heena T Shaikh and Kazi Kutubuddin Sayyad Liyakat, An investigation into the use of nanotechnology in medical-military applications. International journal of Nanobiotechnology. 2026; 12(1): -p. Available from:https://journalspub.com/publication/uncategorized/article=25271
143. Kazi Kutubuddin Sayyad Liyakat, An Overview on Nanomaterial-Enabled Electronic Skin for Physiological Sensing and Biomedical Use. International journal of Nanobiotechnology. 2026; 12(1): -p. Available from:https://journalspub.com/publication/uncategorized/article=25280
144. Heena T. Shaikh, Kazi Kutubuddin Sayyad Liyakat. A Technical Overview of Nanorobots Using Nanotechnology. International Journal of Nanomaterials and Nanostructures. 2026; 12(1): 31–38p. Available from:https://journalspub.com/publication/uncategorized/article=25222
145. Heena T. Shaikh, Kazi Kutubuddin Sayyad Liyakat. A Survey on Hydrogen Storage System using Alloys. International Journal of Energetic Materials. 2026; 12(1): 13–19p.
146. Kazi Kutubuddin Sayyad Liyakat. Intelligent Trajectories: Harnessing Artificial Intelligence for Next Generation Missile and Propellant Design. International Journal of Energetic Materials. 2026; 12(1): 20–26p.
147. Kazi Kutubuddin Sayyad Liyakat. A Review of Electrical Conduction, Optical Sensing, and Semiconductor Device Innovations. Journal of Semiconductor Devices and Circuits. 2026; 13(1): 10–18p.
148. Kazi Kutubuddin Sayyad Liyakat, Heena T Shaikh. Dual-Wavelength and Tunable Fiber Lasers for Microwave Photonic Applications. Journal of Microwave Engineering & Technologies. 2026; 13(1): 17–25p.
149. Heena Shaikh, Kazi Kutubuddin Sayyad Liyakat. Electromagnetic Field Effects on Biological Systems and Safety Evaluation of Microwave Exposure. Journal of Microwave Engineering & Technologies. 2026; 13(1): 26–33p.
150. Kazi Kutubuddin Sayyad Liyakat, Heena T Shaikh. An Overview on Microwave Remote Sensing for Earth Observation. Research & Reviews: Journal of Space Science & Technology. 2026; 15(1): 21–25p.
151. Kazi Kutubuddin Sayyad Liyakat, Heena T Shaikh. An Overview on Harnessing Microwave Frequencies for Next-Generation Satellite Communication and Earth Observation. Research & Reviews: Journal of Space Science & Technology. 2026; 15(1): 1–6p.
152. Kazi Kutubuddin Sayyad Liyakat. AI-Driven IoT in Self-Healing Grid Power Systems: A Study. International Journal of Electrical Power System and Technology. 2026; 12(1): 15–24p.
153. Kazi Kutubuddin Sayyad Liyakat, Heena T Shaikh. An Overview on Microwave Remote Sensing for Earth Observation. Research & Reviews: Journal of Space Science & Technology. 2026; 15(1): 21–25p.
154. Liyakat K S S, Heena T S, Liyakat K K S. A study on Cognitive Signal Processing for Terahertz Horizons: The Role of AI in Enabling 7G Communication Networks. J Adv Res Sig Proc App 2025; 7(2): 8-12.
155. Liyakat K K S. Design and Optimisation of a Robust D-Flip Flop in Quantum-dot Cellular Automata Technology using QCA Designer. J Adv Res Microelec VLSI 2025; 8(2): 14-24.
156. Sayyad Liyakat. AI Driven IoT Based Satellite Remote Sensing System: KSK Approach in Satellite Remote Sensing. International Journal of Satellite Remote Sensing. 2026; 4(1): 50–57p.
157. Sayyad Liyakat, Heena T Shaikh. Nuclear Reactor Safety Using Seismic and Natural Disaster Protection: A Study. Journal of Nuclear Engineering & Technology. 2026; 16(1): 25–34p.
158. Heena T Shaikh. Photonic Diagnostics: Harnessing Optical Sensing for Non-Invasive Assessment of Coronary Obstruction. International Journal of Optical Innovations & Research. 2026; 4(2): 25–30p.
159. Heena T Shaikh, Kazi Kutubuddin Sayyad Liyakat. A Comprehensive Review of CMOS Analog Circuit Design Techniques for Low-Power VLSI Systems. International Journal of VLSI Circuit Design & Technology. 2026; 4(1): 12–24p.

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 6, Issue 8, June 2026
Impact Factor: 8.2

160. Kazi Kutubuddin Sayyad Liyakat. Performance Improvement of Standalone Solar PV Pumping System Using Supercapacitor. International Journal of Electrical Power and Machine Systems. 2026; 4(1): 62–70p.
161. Heena Shaikh, Kazi Kutubuddin Sayyad Liyakat. Enhancing Solar Water Pumping in arid Regions with Hybrid Super Capacitor and Battery Storage. International Journal of Electrical Power and Machine Systems. 2026; 4(1): 18–29p.
162. S. H. Tajoddin, P. S. Kolhe, and K. K. S. Liyakat, "An Overview of Microcontroller-based Intelligent Pill Box Employing Sensors by E-mail Facility," Journal of Electronics Design and Technology, vol. 3, no. 2, pp. 13-23, May 2026.
163. Kazi Kutubuddin Sayyad Liyakat. An AI-Driven IoT Framework for Autonomous Quality Assurance in Optical Lens Manufacturing. International Journal of Optical Innovations & Research. 2026; 4(1): 36–41p.
164. Kazi Kutubuddin Sayyad Liyakat. A Study on the Use of AI and Sensors in Aerospace. Journal of Aerospace Engineering & Technology. 2026; 16(1): 24–33p.
165. Kazi Kutubuddin Sayyad Liyakat, Heena T. Shaikh. An Overview of Reimagining MOSFET as Precision Thermal Sensor. International Journal of Analog Integrated Circuits. 2026; 12(1): 8–13p.
166. Kazi Kutubuddin Sayyad Liyakat, Heena Shaikh, Kosgiker G.M. An Overview on VLSI based Hardware Security in IoT Node. International Journal of VLSI Circuit Design & Technology. 2026; 4(1): 51–56p.
167. Heena T Shaikh, Kazi Kutubuddin Sayyad Liyakat. Intelligent Electromagnetic Synthesis: An AI-Driven IoT Framework for Adaptive Antenna Design in Missile Navigation. International Journal of Radio Frequency Innovations. 2026; 4(1): 1–15p.
168. Heena T Shaikh, Kazi Kutubuddin Sayyad Liyakat. A Study on AI-Driven Multi-Layered Defense in 6G Ecosystems. International Journal of Radio Frequency Innovations. 2026; 4(1): 1–9p.
169. Liyakat K K S. A Study on Intelligent Missile Launching, IoT based SightandShoot Capability, Journal of Advanced Research in Aeronautics and Space Science, 2026; 13(1&2): 20-25. Available at: https://adrjournalshouse.com/index.php/Jof-aeronautics-space-science/article/view/2729