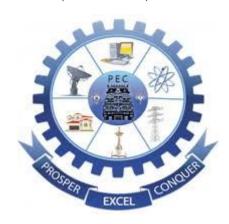# DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

IBM – LITERATURE SURVEY

PROJECT TITLE

GAS LEAKAGE MONITORING AND ALERTING SYSTEM

(2022-2023)

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S. N O	TITLE OF THE PROJECT	ADVANTAGES	DISADVANTAGES	TECHNOLOGY USED
1	IoT Application for Gas Leakages Monitoring	This is an intelligent device with a highly sensitive gas sensor and LCD display that displays the device's status as well as the gas value in the environment. The device is placed in a position where there is a possibility of gas leaks	It measures toxic gases in very low concentrations. It is difficult to know failure modes unless very advanced methods of monitoring are used.	Internet Of Things
2	Gas leakage detection and alerting system using Arduino Uno	The sensor has an advantage to combine a sensitivity response time. If the LPG sensor senses gas leak from work place or home, sensor output goes to active low (logic-0) condition. Arduino UNO is used in the project; low signals are overlooked by the Arduino and gas leakage is been noticed by the Arduino	The storage is non-volatile storage and EEPROM. The key comparison of a non-volatile storage with the EEPROM is that the incontrovertible fact that non-volatile storage contents are erasable	Arduino UNO
3	A Survey on the Integration of Blockchain with IoT to Enhance Performance and Eliminate Challenges	The emergence of blockchain opened the door to solve some challenges related to IoT networks. Blockchain characteristics such as security, transparency, reliability, and traceability make it the perfect candidate to improve IoT systems, solve their problems, and support their future expansion	This research proposes a new architecture based on three layers system consisting of; devices layer, new blockchain layer, and cloudlet-blockchain layer. It is the only architecture that utilizes dew computing in the integration process between IoT and blockchain.	Block chain technology

4	Automatic Gas Leakage Detection and Prevention System	A robotic drive which is capable of detecting the gas leakages in pipelines and it will detect the leakage and automatically closes the valve by using Arduino controller	the integration technology may also create new risks. Sensor technologies, for example will need to be robust enough to prevent false alarms, and ensure that vital information such as the location of occupants not lost due to data overload during a fire.	Integration technology
5	Microcontroller based LPG Gas Leakage Detector	the use of LPG Gas leakage detector along with the stepper motor instead of using other simple Gas leakage detector. The sensor we are using here has excellent sensitivity combined with a quick response time.	Main disadvantage of those prototypes were the absence of communication in particular areas	Technologies like GSM, GPS, internet
6	An Efficient Counter-Based DDoS Attack Detection Framework Leveraging Software Defined IoT (SD-IoT)	The increase in DDoS attacks has made it important to address the consequences which imply in the IoT industry. This research proposes an SD-IoT based framework that provides security services to the IoT network. We developed a C-DAD (Counter-based DDoS Attack Detection) application that is based on counter values of different network parameters, which helps to detect DDoS attack successfully.	We have extensively analyzed the proposed framework's performance for attack detection time and other parameters such as SD-IoT network throughput, CPU and memory utilization,	SD-IOT technology

7	REMOS-IoT-A Relay and Mobility Scheme for Improved IoT Communication Performance	This paper proposes REMOS-IoT - A Relay and Mobility Scheme for improved IoT communication performance in support of increased QoS for the data exchange services between mobile IoT devices.	Alike Although REMOS-IoT was deployed on NS-3, significant differences were not found when comparing the schemes, in relation to the simulator used, with results being	Internet Of Things
8	Gas Detection and Identification Using Multimodal Artificial Intelligence Based Sensor Fusion	In this work, a multimodal AI-based fusion framework for reliable identification and detection of gases is developed. We considered four classes for data collection using sensors, namely thermal camera for capturing the thermal signature of the gases and array of gas sensors for detection of specific gases.	This is essential in high-risk applications such as leak detection in chemical plants, identification of explosives, etc. The proposed architecture is based on the deep learning frameworks and hence require large number of data samples for appropriate training of the network.	Artificial Intelligence Based Sensor Fusion
9	LPG Gas Leakage Detection and Alert System	The LPG leakage detection and alert system presented in this section is a simple , yet reliable. It is battery operated and hence portable. It is designed in such a way that it can also be operated with ac power supply	When heavy dust, steam or fog blocks the laser beam, the system will not be able to take measurements	Wireless and GSM technology
10	Automated and Scalable Online Conformance Testing for IoT Applications	This technique of automatic conformance testing can lesser the cost and human intercession to decrease the number of steps .	The current IoT market is fragmented due to the inefficiency in conformance testing, which creates interoperability issues between multiple IoT applications.	Internet Of Things