

Industry-specific intelligent fire management system

LITERATURE SURVEY

Jia Jiang proposed the fire data acquisition and transmission by the way of ZigBee wireless sensor network as the bottom, if made a warning by background intelligent fire analysis system. Then finally the application scheme made an effective control for fire through triggering will corresponding fire joint action equipment by a scientific fire emergency decision system [1]. In that the root cause for the fire will have to be analysed and prevent from the fire before it is triggered. Through this hazardous fire accidents should be avoided and many lives can be saved [2]. To identify the application of narrowband Internet of Things (NB-IoT) technology for the field on fire protection could fundamentally enhance the combat capability of fire fighting forces, In these analyses and introduces an intelligent fire-fighting system based on the new industry standard, and a smoke-fire detection and alarm device based on the Internet of Things (IoT) platform and Nb-IoT technology. It will also put forward corresponding solutions to the problem of smoke fire, such as the value, advantages and future expectations of the solution [3]. In this system, a few advancements have been implemented in order to help the students in various aspects by using multiple and distinct Arduino devices. However , an android application is developed to facilitate the security officer in order to identify the car information that are involved in the accident that might be occur in the university parking area [4]. In this system aim to be notify the users on the detection of flame with the help of a flame sensor so that the person can take action accordingly. With the help of Internet of Things (IoT) paradigm, the fire detection system will be developed using Raspberry-Pi that makes use of flame sensor and Google cloud-based messaging service (GCM) for sending an alert message to the users. Therefore, the outcome of this device helps people in taking necessary precautions in the home welfare (Mitul Sheth, Anand Trivedi, 2020) [5]. We have designed a cheap Internet of Things based system which enables the early detection of house fire and gas leaks. We had to simulating a scenario where we detect the rising possibility of house fire in the kitchen environment, by measuring temperature and the gases concentration. To identify the communication process and reduce the number of sent packets from the measuring node to the system gateway, when we applied time series forecasting approach based on moving average prediction scheme (Marjan Ralevski and Biljana Risteska Stojkoska,2019) [6].

References

- [1] Jia Jiang, Zhe Gao, Huanhuan Shem, changsheng Wang, “Research on The Fire Warning Program of Cotton Warehousing Based on IoT Technology”, International Conference on Logistics, Informatics and Service Sciences (LISS),IEEE,2015
- [2] N.Savitha, S.Malathi, “A Survey on Fire Safety Measures for Industry Safety Using IOT”, International Conference on Communication and Electronics Systems (ICCES),IEEE,2018
- [3] Tianxiang, Ping Hou, “Application of NB-IoT in Intelligent Fire Protection System”,International Conference on virtual Reality and Intelligent Systems (ICVRIS),IEEE,2019
- [4] Anis Farihan Mat Raffel, Nur Syafiqah Awang, Nur Shamsiah Abdul Rahman, Nor Saradatul Akmar Zulkfli, “Internet of Things (IoT) Based Fire Alert Monitoring System for Car Parking”,International Conference on Electrical and Electronics Engineering (ICEEE),IEEE,2020
- [5] Mitul Sheth, Anand Trivedi, Krishna Suchak, Kumar parmar, Deval Jetpariya, “Inventive Fire Detection utilizing Raspberry Pi for New Age Home of Smart Cities”, Third International Conference on Smart Systems and Inventive Technology (ICSSIT),IEEE,2020
- [6] Marjan Ralevski, Biljana Risteska Stojkoska, “IoT based System for detection of gas leakage and house fire in smart kitchen environments”,27th Telecommunications Forum (TELFOR),IEEE,2019