TEAM ID: PNT2022TMID26034

PROJECT NAME: Hazardous Area Monitoring for Industrial Plant Powered by IOT

An IoT-based Industrial Monitoring System with intelligent sensors is what this Study aims to build. The manufacturing industry might benefit from the proposed technology. Any manufacturing industry that incorporates technology will guarantee the Public's Safety and Prevent Accidents. In the field of equipment, using Automation technologies lowers the likelihood of Loss and Accidents.

On the Internet of Things, the Industrial Monitoring System Project is based on using Smoke and Temperature Sensors, Arduino is utilised to operate a variety of sensors, giving the industry total control. In this project, data delivery to the user is accomplished through the Internet of Things (IoT). Using Sensors, Electronics, Software and Networking, the Internet of Things (IoT) is a network of "Things" that enables the data communication between physical objects. These systems don't require human interaction because they are self-sufficient. The Arduino Mega Microcontroller receives inputs from a number of sensors, including the Smoke, Temperature and Humidity sensors.

The Microcontroller then transmits the data to the IoT module (ESP8266). Microcontrollers can connect to Wi-Fi networks, create TCP/IP connections and send data to the ESP8266 chip. The Temperature sensor and the Smoke sensor both detect fires. Informative messages would also be shown on the LCD for manual control at the same time. For this project, the Wi-Fi module needs to be connected to a Wi-Fi zone. The GSM module can also be used to carry out this job.

S.No	Title	Authors	Abstract	Drawbacks
01.	IoT-Based Data Logger for Weather Monitoring Using Arduino-Based Wireless Sensor Networks with Remote Graphical Application and Alerts	Jamal Mabrouki, Mourade Azrour, Driss Dhiba, Yousef Farhaoui, and Souad El Hajjaji	In recent years, monitoring systems play significant roles in our life. So, in this paper, we propose an automatic weather monitoring system that allows having dynamic and real-time climate data of a given area. The proposed system is based on the internet of things technology and embedded system. The system also includes electronic devices, sensors, and wireless technology. The main objective of this system is sensing the climate parameters, such as temperature, humidity, and existence of some gases, based on the sensors. The captured values can then be sent to remote applications or databases. Afterwards, the stored data can be visualized in graphics and tables form.	No information about where we can implement this, just the monitoring thing is explained and done.
02.	Design and Validation of a Multifunctional Android-Based Smart Home Control and	LUN-DE LIAO (Member, IEEE), YUHLING WANG YUNG-CHUNG TSAO, I-JAN WANG, DE-FU	Users often need to control and monitor the environmental variables of their homes, even when they are not at home. In this paper, we present a multifunctional, low-cost, and flexible system for smart home control and environmental monitoring. This system employs an embedded micro web server based on an Arduino Yún microcontroller with Internet connectivity that allows remote device control.	Bounded only to mobile application and there is no web application or SMS for fast notification as we may not have our Internet connections on always.

	Monitoring System	JHANG, TSUNG-SHENG CHU, CHIA-HUI TSAO, CHIH-NING TSAI, SHENG-FU CHEN, CHIUNG-CHENG CHUANG, AND TZONG-RONG GER	The proposed system can be controlled via the Internet through an Android-based mobile app. To guarantee access regardless of Internet availability, the proposed system can also be controlled via standalone manual operation using a touch display. The proposed system transmits sensor data to a cloud platform and can receive commands from the server, allowing many devices to be automatically controlled. To demonstrate the feasibility and effectiveness of this system, devices such as light switches, power plugs, and various sensors, including temperature, gas, 2.5-µm particulate matter (PM2.5) and motion sensors, were integrated into a prototype of the proposed home control system. Finally, we implemented the prototype in a model home to validate the flexibility, scalability, usability, and reliability of the system.	
03.	Micraspis: A Computer-Aided Proposal Toward Programming and Architecting Smart IoT	LONG-PHUOC TÔN, LAM-SON LÊ, (Member, IEEE), AND MINH-SON	A wearable is a lightweight body-worn device that relies on data-driven communications to keep people connected purposefully, for instance, for fire-fighting, prompting fast-food clients, and medical treatment. With the rise of wearable computing in the era of IoT-driven smart applications, programmers now expect the time to market for these devices to be shortened.	Sole usage of Wearable device only. This can cause limitations as we may not be able to monitor through other means.

	Wearables	NGUYEN	While support for IoT programming in general has gathered traction, tool proposals that automate the development of smart solutions based on the Internet of Wearable Things, though of paramount importance, still stay on the sidelines. We propose a code generation tool called Micraspis that allows a wearable to be described both functionally and architecturally – as if they are two sides of the same coin. The tool has an underlying model-to-code transformation mechanism to generate source code that is executable on a specific IoT programming platform such as Arduino. Our experiments demonstrate that programming code generated by Micraspis amounts to at least 60% of the source code needed to fulfill the business logic of ordinary wearable devices. We conducted an interview to meticulously collect programmers' assessment on how Micraspis assists them in programming and architecting smart IoT wearables. A total of 161 programmers responded to a Likert scale questionnaire, with which at least 65% of them either agree or strongly agree. Overall, the results show that Micraspis has promising applicability in supporting IoWT-enabled smart solutions.	