S NO	TITLE	Authors	Abstract	Drawbacks
1	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.
2	Design and Validation of a Multifunctional Android-Based Smart Home Control and Monitoring System	LUN-DE LIAO (Member, IEEE), YUHLING WANG YUNG-CHUNG TSAO, I-JAN WANG, DE-FU JHANG, TSUNG-SHENG CHU, CHIA-HUI TSAO, CHIH-NING TSAI, SHENG-	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. 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	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.

		FU CHEN, CHIUNG-CHENG CHUANG, AND TZONG-RONG GER	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.	
3	Micraspis: A Computer-Aided Proposal Toward Programming and Architecting Smart IoT Wearables	LONG-PHUOC TÔN, LAM-SON LÊ, (Member, IEEE), AND MINH-SON NGUYEN	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. 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.	Sole usage of Wearable device only. This can cause limitations as we may not be able to monitor through other means.

4	A Privacy-Preserving Iot-Based Fire Detector	ABDULLAH H. ALTOWAIJRI, MOHAMMED S. ALFAIFI, TARIQ A. ALSHAWI, (Member, IEEE), AHMED B. IBRAHIM, AND SALEH A. ALSHEBEILI	Fire detection has been an issue of interest to researchers due to its significant damage to lives and property within a very short time. One of the recent solutions developed to detect fire is to use Internet of Things (IoT) devices equipped with cameras for surveillance. The captured videos of surroundings may be processed by the IoT devices themselves or at the cloud. The latter case is required if the detection algorithm is computationally demanding. However, the use of clouds has a flaw. In fact, using the cloud could pose the threat of having the privacy of a place violated, either through hacking or unauthorized access to the footage of the place where the cloud is installed. In this paper, a fire detection system that preserves the privacy of surroundings, while maintaining a high level of accuracy for fire detection is proposed. The proposed system makes use of the cloud for fire detection; and that is achieved by sending to the cloud features extracted from the video captured by the IoT device, instead of sending the actual footage. Binary video descriptors and Convolutional Neural Network (CNN) have been used to develop the fire detection algorithm. The video descriptors are used to extract features, while CNN is used for classification. Videos with real fire and non-fire scenes have been used in this development. Results show that the performance of proposed fire detection algorithm can achieve 97.5% classification accuracy, that outperforms the state-of-the art algorithms which make direct use of raw videos. Therefore, the proposed fire detector is as reliable as other available systems, with the advantage of having a privacy-preserving capability. It is also demonstrated that the proposed video descriptors can be implemented for real-time processing using an IoT device, Raspberry Pi 4 platform, with an average processing speed of 100ms per frame, which satisfies practical needs.	No online web app or mobile applications where we can see the current situation of the monitored environment.