

Review of: "Visualization of Home Security Sensor System Based on IoT Server"

Sheik Anik¹

¹ Virginia Polytechnic Institute and State University

Potential competing interests: No potential competing interests to declare.

The paper tries to address the home security issue with a focus on the detection of gas leakage and unauthorized entrance with the help of an Arduino-based IoT system. The following are critical concerns and suggestions on the submitted manuscript:

1. The author should clearly state the novelty of their work in the abstract. From the current abstract of the paper, it is not clear what is the novelty of this work.
2. The introduction section should clearly describe how this work is innovative and different from similar works in the domain. Currently, the effectiveness of the work is not clear.
3. The title of Section 2 should be changed to something like "Components Description" instead of "Literature Review".
4. A proper literature review should be conducted and included in the manuscript. It is very important in any research paper as it defines the scope of the work based on the analysis of the existing related works.
5. There are several language mix-ups and typos in the manuscript which should be corrected. For example, Figure 6 (prototype instead of *prototipe*), Figure 8 (language mix-up)
6. The authors should provide higher-resolution images for the figures.
7. On page 4 there is a line *"One type of PIR sensor is the HC-SR501 PIR module which works to produce high-value output when it detects humans in front of the sensor, and low values when the sensor does not detect humans according to the sensor range."* Does this sensor detect only humans or motion by any living being (like animals) or the motion of large objects? The authors should provide proper citations for such claims.
8. The paper should include a description of the testing conditions of the proposed prototype.
9. Is there a possibility of false positives? Does the buzzer go off while the owner is at home? How can the system distinguish between the actual owner and an intruder?
10. A detailed case study should be provided for proof of the application of the proposed system.
11. The paper should include a section on the security threats and limitations of the proposed system.
12. The conclusion section should sum up the novelty, advantages, lackings, and, performance evaluation summary with the existing works.

Overall, it is recommended that the authors address these issues before proceeding to the next step of the publication of this manuscript.

