

Smart Home Security System Based on Internet of Things : A Literature Review

Debri Yanti Safitri Santoso, Melisa Galuh Parwati, Zaky Khairul Fajar Arlya, Diky Zakaria

Department of Mechatronics and Artificial Intelligence
Universitas Pendidikan Indonesia
Purwakarta, Indonesia

*Correspondence author email : debriyanti@upi.edu

Introduction

Smart home security systems based on the Internet of Things (IoT) have become an increasingly important and relevant research topic in recent years. One of the main advantages of an Internet of Things (IoT) security system is the ability to integrate various devices, such as security cameras, door sensors, alarm systems, automatic door controls, and others into a database to store event data.

This form of integration can allow homeowners to easily control their home via mobile devices or computers. Apart from that, this system can also provide notifications to home owners if there are suspicious events.

Methods

The research used a Systematic Literature Review (SLR)

Article Selection

No	Process	Number of Article
1	Enter keywords ("Smart Home Security System" AND "IOT") in Google Scholar based on title, abstract and keywords.	503 Articles
2	Excludes literature reviews, books, repositories and conference papers	198 Articles
3	Article with closed access	80 Articles
4	Sort out articles that are not related to the title of the literature.	15 Articles
Final number of articles used		15 Articles

Article Review Process

After the article selection process was complete, the author then downloaded 15 articles and reviewed the articles by answering the 5 predetermined RQs, providing discussion, and providing conclusions.

022

Research Questions

Based on this background, the author has reviewed the factors that will be discussed in seeking analysis in discussing smart home security systems. The following research questions (RQs) are :

- RQ1: What method is used?
- RQ2 : What security system is created?
- RQ3: How does the system work?
- RQ4 : What devices are used?
- RQ5: What are the advantages/benefits of the system?

Result & Discussion

We used **15 articles** used as article metadata to answer the RQs

Answering RQs

RQ1: What method is used?

Most of these articles use the RFID method, RFID (Radio Frequency Identification) is a technology used to identify and track objects or people automatically using radio waves.

RQ2 : What security system is created?

There are many home security systems that have been created, such as smart door locks, smart alarm systems and smart fire detection alarms.

RQ3 : How does the system work?

The system works by detecting movement which results in an RF signal turning on and the system will automatically lock the door and then provide a warning via cellphone in the form of a message or alarm.

Answering RQs

RQ4 : What devices are used?

The devices used mostly use the Arduino Uno microcontroller, RFID, buzzer, Bluetooth sensor, motion sensor and camera.

RQ5 : What are the advantages/benefits of the system?

The benefit of a smart home security system is that it provides security and comfort at home at low cost and low power consumption because it uses simple tools and can also provide familiarity with the use of the internet of things in everyday life.

Conclusion

A smart home security system based on the Internet of Things (IoT) makes this possible smart device integration to increase security and comfort at home. Home security is a major concern, and the Internet of Things (IoT) makes it possible homeowners to control and monitor their homes more efficiently, either from inside the home or remotely via connected devices. In this literature review article, we have explored various aspects Internet of Things (IoT) based smart home security system and concluded that This technology has great potential to improve home security as well as provide flexibility for users in managing security and comfort at home.



Thank
You.