# Home Alarm Security System using Arduino and Telegram Bot

Muhammad Amirul Hafiz Mat Hussin[1], Rafiza Ruslan[2]
[1]*miruhafiz@gmail.com*
[2]*rafiza.ruslan@uitm.edu.my*

## ABSTRACT

In order to safeguard people's property from danger, home security is a crucial problem. At the moment, school breaks and other public holidays tend to be when house burglaries rise. The main purpose of this project is to develop and create security system using PIR motion sensor the detect any movement from living bodies which also consisted of buzzer that intended to the potential intruder and Node MCU to send an alert in form of notifications via Telegram Bot to the owner. The prototype was evaluated using functionality testing, network testing and user acceptance testing. For the functionality testing, the prototype is tested 3 times in different range to see if it worked as intended. For network testing, the prototype is put into several situations to test the response time of the network. The user acceptance is providing 30 home owners with a questionnaire to gauge their perceptions of the home security system's usability. The outcomes showed how practical, fast, and simple to operate the home security system was. Therefore, when the system detects an intruder in the property, the home security system may assist the home owner in taking prompt action, such as contacting the authorities.

**Keywords:** Internet of Things (IoT), Node MCU, Smart Home Security System, Telegram Bot, Alert, Buzzer