

ABSTRACT

Security is a very important thing for everyone. Theft and robbery are the most common crimes that occurs in areas with dense settlements. In this study, we designed an intelligent surveillance camera system along with a room automation system to support the security, prevent theft or robbery and provide a sense of comfort while you are in the residence.

The system consists of three section, which is the number of people calculation system, surveillance camera system and room automation system. The number of people calculation system will act as the central to control the flow of the other system. The number of people in the room will be the overall system flow determinant variable. The surveillance camera system will take a picture of each person who entered the room and store it in the storage memory. The system will also record the activity in the room and send an email as notification when someone unrecognized enters the room. The system is designed to be integrated with face recognition system in order to identify the person who entered the room. The room automation system created is an automatic light and room temperature control using a and AC remote module.

The system for counting the number of people who enters the room has a fairly high success rate of 90.9% and it can calculate continuously. While the system for counting the number of people who leaves the room has a success rate of 81.81% and it can not calculate continuously. The surveillance camera system and room automation system created are functioning well and run based on the change of the variable of the number of people obtained from the system calculation.

Keywords: *Raspberry Pi, PIR Sensor, Ultrasonik Sensor, Surveillance System, Automatic System, Smart Room.*