DESIGN AND BUILD A HOME SECURITY SYSTEM USING FACE DETECTION METHOD

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ABSTRACT

The increase in crime cases every day makes us uneasy when we leave the house empty. Lack of home security makes the perpetrators of theft free to carry out crimes. A home security system is an important thing that can prevent unwanted things. Therefore, the author makes a home security system design tool using the face detection method. The author uses an ESP32 Cam micro controller and is equipped with sensors that can monitor the state of the house such as magnetic reed switches and PIR with room lights and buzzer outputs. The OV2640 camera as the module used by the ESP32 functions to process faces detected in the room. In its implementation, the micro controller and its sensors can be monitored via the telegram messenger application. The results of the tests carried out on the magnetic reed switch have a 100% success rate percentage. Furthermore, testing of the PIR sensor has a success rate percentage with a value of 93.33%. In testing the Face detection method, the percentage of success rate is 96.67%. In this design, each sensor runs quite well and according to the commands in the program.

Keywords *: ESP32 Cam, Telegram, Security*