ABSTRACT

Based on data from the Department of Fire and Rescue of DKI Jakarta Province in 2018 (1,528) cases of fire occurred [8]. Throughout 2018 in DKI Jakarta fires snatch (25) fatalities, (23) seriously injured, (159) minor injuries, and causes (6348) people to become refugees.

In reducing the number of fatalities and material losses in a fire, increasing safety standards in buildings and assisting in investigating the cause of the fire. One way to find out if there is a fire is to use several sensors that can detect a fire is connected to the NodeMCU microcontroller.

In this final project, the design and manufacture of a Human and Fire Detection System will be carried out. The system is made using several sensors such as DHT11, MQ-2, PIR, buzzer module, led and camera module. The results obtained are that a system that records data from the DHT11, MQ-2, PIR sensors can send data to Firebase and images to Google Drive. The ESP8266 module used can function properly. Then for the entire fire detection system based on data and analysis and testing the results of the fire detection system design can detect fires as planned and run as desired, namely being able to record data from sensors, categorize room conditions, provide warnings in case of fire using a buzzer and send it to server. For the whole human detection system using the PIR sensor for movement in the room can only function when the room has no fire. On fire detectors and humans using ESP32-CAM to get room images and send to Google Drive works fine

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