

Abstract

Smoking is a bad habit that many people do and we often encounter people smoking in public places. Cigarettes contain many harmful substances that come out along with cigarette smoke. Smoking habits done indoors can harm people around. So that required a system that can detect cigarette smoke. At the end of the previous task there is a cigarette smoke detection system but the system can not detect other smoke, such as smoke mosquito repellent. If smoke of mosquito repellent is detected by cigarette smoke and the system is running then the usefulness of the mosquito repellent will be lost. So in this final task created a system that can distinguish cigarette smoke and mosquito repellent smoke. The system uses the Mq-7, Mq-135 and Mq-137 sensors to detect the presence of smoke and use the Naive Bayes method for smoke type classification. When the sensor detects smoke the sensor will pass data to the Arduino which then the data will be sent and processed on the Thingspeak server and will generate smoke prediction. When smoke prediction produces cigarette smoke it will send command to Arduino to run fan or air circulator. Based on the results of testing the system using Naive Bayes methodologist managed to classify the smoke of 95.33%. And in the test using actuator of 86% this result obtained because of high delay on the calculation of Naive Bayes on server Thingspeak.

Keywords: Smoke, Cigarette, Naïve Bayes, Mq-7, Mq-135, Mq-137.