Abstract

In this final project proposed an automated air purifier and humidity prototype using fuzzy logic, this is necessary because most individuals spend their time in a room where the level of pollution and humidity of the air is unmeasurable and intact. The existing air purifiers and moisturizers are still unable to detect the level of contamination and moisture of the surrounding air. In this final project prototypes will be built by utilizing the Carbon Monoxide (MQ7), Particulate Matter (Sharp GP2Y1010AUF), and Temperature and Humidity (DHT11) sensors which are connected by using fuzzy logic to detect the level of air pollution and humidity which is then used to run the actuator in the form of air purifiers and humidifiers. The result of this final project is an air purifiers and humidifiers that are automated with fuzzy logic and have been tested in a room with three conditions ie non-smoking, with cigarette smoke, and also dry air. In the test results the use of prototypes successfully to detect and clear the air that has been contaminated with cigarette smoke and also prototype managed to detect and moisten the air faster than when not using prototype.

Keywords: sensor, fuzzy, carbon monoksida, particulate matter, temperature, humidity