

ABSTRACT

Air quality in a room is a factor that needs to be considered because it can affect human health, even though there are efforts to maintain good indoor air quality. Complaints from residents ranging from odors, headaches, eye or throat irritation, allergic reactions and other symptoms sometimes occur. In this study, 3 samples were taken to determine good indoor air quality, namely temperature, humidity and carbon dioxide levels. A good indoor temperature has a value of 18-30°C with humidity ranging from 40-60%, while a good indoor carbon dioxide level is <1000 ppm. The purpose of this study is to help monitor indoor air quality remotely and improve the accuracy of sensor value readings. The sensor that will be used in this study is the DHT22 sensor which functions to monitor temperature and humidity and the MQ-135 sensor functions to monitor the level of carbon dioxide in the room, using the linear regression method to increase the accuracy value of the sensor used. The results of this study are expected after using the linear regression method during calibration can increase the accuracy of the sensor used. The results of linear regression testing carried out on the DHT22 temperature sensor and the MQ-135 CO2 sensor obtained an average error value of 5.551% to 1.734% for temperature, while for the MQ-135 CO2 sensor the average error value was 9.641% to 2.548%. The results of testing the QoS parameters with the THIPON standard obtained a delay value of 212,387ms, Throughput 3444,297bit/s and packet loss of 0.15%. From the results obtained, it can be concluded that the sensor value obtained after the linear regression process will be better.

Keywords: DHT22, MQ-135, Internet of Things (IoT), Linear Regression