

ABSTRACT

The air quality in Indonesia is getting worse every day. To get awareness from the public, of course, evidence is needed by using an air pollution monitoring system. However, the number of air pollution monitoring systems in Indonesia is still very rare, resulting in uneven air quality data collection in Indonesia, especially in Bandung City, West Java.

In this Final Project research, a monitoring system is designed to determine air quality, sensors are installed with a distance that is not too far around 1 meter each node to get better sensor readings. The air quality measured is air quality using the ISPU standard with 5 gas samples of dust particles (PM 10), Carbon Monoxide (CO) gas, Nitrogen Dioxide (NO₂) gas, Ozone (O₃) gas, and Sulfur Dioxide (SO₂) gas. The data obtained from sensor readings is then sent to the Antares IoT database or platform. The data can be viewed or accessed through mobile apps.

The results of this Final Project research use 2 nodes, each sensor node has 5 sensors, namely the MQ-131 sensor, MQ136 sensor, MQ-7 sensor, MICS-6814 sensor, sharp GP2Y1010AU0F sensor. After testing, the average speed of sending sensor data to Antares is 1323 bps for sensor node 1 and 5929 bps for sensor node 2, the average delay in sending sensor node 1 data to Antares is 1.916 seconds and 1.716 seconds for the average delay in sending data from sensor node 2, and no packets are lost in transmission. The data can be viewed or accessed through the Android mobile app.

Keywords: *Air pollution Monitoring, Internet Of Things, Mobile App*