

## ABSTRACT

Since the rise of global warming case in this world, the weather became erratic. Unlike when 10 or 20 years ago, the weather can be predicted easily. Even an area could be rain, but other areas adjacent to the area did not rain at all. Among students and professionals, weather anomalies can make a separate problem. Therefore, we need a weather monitoring that is accessible to everyone.

Monitoring the weather conditions is one of the solutions to find out the weather conditions in real-time. This final task designs a parameters monitoring system in real-time weather and prediction of floods in the area around the river flow by changing the height of the river water and precipitation. Data received by the sensor will be sent to the server using the GSM module which will be processed for the purposes of forecasting. In this final project, the author makes the weather parameters monitoring system. Parameters measured include temperature, humidity, and barometric pressure. The measurement data will also be compared with data from <http://openweathermap.org/> and default Weather app from Windows 10.

From the 5 times sensors measurement experiments, sensors can measure temperature, humidity, and barometric pressure. The system also can upload the data to the server. While the error rate measurement results when compared to <http://openweathermap.org/> and default Weather app from Windows 10 are: temperatures of 3.64 % and 5,9 %; humidity of 22,65 % and 28,13 %; while the air pressure of 4,43 % and 7,5 %.

Keywords: *Weather monitor, temperature, air humidity, air pressure, GSM Module.*