

ABSTRACT

Nowadays, flood has been transformed to be a very big disaster, especially to the people who were live in riverside. In some area, they always got some flood which was coming from the higher area. Though there were no rain happened in its place, sometimes they got that flood from the higher area as that place had got so much water caused by the rain in its place. The unpredictable presence made so many villagers had no time to prepare for it as well.

So, they need an early warning system, especially for the people who were lived in riverside. There would be more time given before the flood was coming, because we integrated some artificial intelligence , by combining the data from our special sensors. This final project uses an ultrasonic sensor to measure the river's surface water, and a tipping bucket, to calculate the amount of rainfall. They were well packaged and installed on one place in a spesific area which was allowed by “Balai Besar Wilayah Sungai” as that place was the best environment to do this research.

Based on the testings and results, both sensors could measure as it is. The tipping bucket worked well as well as the ultrasonic sensor. They were automatically send the data to the server, which did processed the data as an endorser of the big system we create. The tipping bucket worked well with error rate by 7% alongside distance sensor with error rate by 19%.

Keywords: *tipping bucket, ultrasonic sensor, server*