

ABSTRACT

Garbage is the biggest cause of Citarum watershed pollution. The main contributors are the floating garbage in the Citarum Watershed which results in a decrease in the quantity and quality of water, this makes Citarum watershed as the largest contributor of Indonesian waste to the sea. There needs to be activities that can prevent, reduce and restore the preservation of Citarum watershed function that can eventually reduce the amount of waste flowing into the sea.

Based on the problem, made a monitoring tool for the of water quality status in terms of the amount of garbage netted on the garbage interceptor by using a load cell sensor used as a rope stretch detector based on the pressure of garbage intercepted with the flow of water in the garbage interceptor along with the monitoring system the garbage interceptor station from the angle factor by using the sensor gyroscope and accelerometer MPU-6050 with a smartphone application so that physical countermeasures can be done. Therefore, monitoring the amount of floating waste is very closely related to the condition of Citarum watershed water needed to control water quality.

The result of this final task is the percentage of average accuracy of the load cell sensor which is 99.96% with an average error percentage of 1.41%. The percentage of average roll slope angle of the MPU-6050 sensor is 99.97% with the average error percentage is 0.0142% and the pitch slope angle of the MPU-6050 sensor is 99.8% with an average error percentage of 0.07%. The system's success rate in sending notifications that roll and pitch angles (X and Y) have exceeded the extreme limit is 90%.

Keywords: *Monitoring, Internet of Things, Load Cell, MPU-6050*