

ABSTRACT

Floods occur because these water sources are no longer able to accommodate the amount of water, so that the water overflows beyond the boundaries of the water source. The frequent occurrence of floods in the Citarum River area, Bandung makes the surrounding community worried and unable to anticipate the arrival of floods.

With this tool, it is hoped that it can help the people of Bojongsoang Village, especially around the Citarum River, to monitor water levels and find out the condition of the Citarum River in real-time. Therefore, an IoT-based monitoring tool was made using ultrasonic sensors HC-SR04 connected with NodeMCU ESP8266. Ultrasonic Sensor HC-SR04 sends data which will be received directly by the public through the application or website.

The Citarum River water level gauge that has been designed has been successfully made, with the lowest calibration value being 99.15% and the highest being 100%, the tool has a high level of accuracy. The time for sending water level data from the tool to the database is 5 to 8 seconds.

Keywords: Citarum River, Flood, HC-SR04, IoT, NodeMCU ESP8266