ABSTRACT

In the present era, there are still many organic and non-organic bins that are left in full for a long time so that the cleanliness around the trash can is still not maintained. In addition to causing unpleasant odors in the environment around the trash because it is left full, it can cause damage to the trash, because the trash can accommodate more than the maximum load in a short time. From the problems that have been explained, it is necessary to monitor the weight and volume of organic and non-organic bins that automatically display information on the condition of trash bins in real time on a web server, and send notification messages via Telegram when the trash can is full. To support this monitoring system, ultrasonic sensors and Load Cell sensors are needed to retrieve condition data from the trash, NodeMCU as a microcontroller that retrieves data from the sensors used is sent to the database via ESP8266 which is connected to the access point, then displayed on the Web Server in real time. If the sensor has reached the fullness level of more than or equal to 80%, then the NodeMCU will send a notification in the form of a message via the Telegram application. Monitoring can in real time show the volume and weight of the garbage in the trash.

Keywords: Monitoring Trash Bins, NodeMCU, Ultrasonic Censor, Load Cell Censor