ABSTRACT

The waste problem is currently a special concern among the community, especially in large, densely populated cities. According to information in 2022, the waste problem in Indonesia shows that of the total 22.44 million tons of waste, around 62.63% has been managed, while 37.37% or around 13.39 million tons has still not been handled. Therefore, this research will discuss how to measure the height and weight of rubbish in a rubbish bin using ultrasonic sensors and load cells and how long the delay in sending data to the Blynk server will be since changes in the rubbish contents, based on variations in height and weight. This research resulted in the waste box system being designed using an ESP32 microcontroller where the ESP32 handles the task as a sensor controller. Furthermore, the system is designed using 2 sensors, including an ultrasonic sensor to detect distance, a load cell sensor to detect weight and the response speed of the Blynk application. influenced by the speed of the internet connected to the ESP32 microcontroller, with an average time delay value of 3.59 seconds

Keywords: monitoring, trash box, esp 32 module, IoT