

ABSTRACT

The waste problem in the city of Bandung seems endless. One solution to this problem is waste management. Waste management of both organic and inorganic waste is needed. One way to treat organic waste is to decompose it into compost for plants. However, inadequate waste processing facilities are also one of the reasons for the ongoing problems. If waste can be processed properly, waste either organic or non-organic won't accumulate and harm the community.

Most common problems with composting are bad odors and too much moisture while making the compost. The reason for this research is to help the community, especially Plastavfall Solution in Bandung, for controlling compost production. This IoT-based research will use the Blynk application and use 2 types of sensors, namely soil moisture detection sensors and DHT 11 for temperature detection. Hopefully this tool will make it easier for the community to make compost at home, as well as measuring temperature and humidity which will affect the final result of making compost.

Data found from several sources, the ideal compost temperature ranges from 30° C to 34° C and the ideal compost humidity ranges from 55% to 60%. In this smart compost design, if the temperature obtained from the DHT 11 sensor is above 34°C, then the control process from the fan will turn on. Meanwhile, if the soil moisture sensor detects moisture less than 55%, the compost will be detected as dry compost and run the pump. The data obtained will be shown to Blynk and users can remotely monitor temperature in real time.

Keywords: Compost, Humidity, Blynk, IoT, Temperature