

ABSTRACT

Dry leaves are a type of organic waste that often causes environmental problems if not managed properly. Burning dry leaves which is still widely practiced, can cause air pollution, respiratory problems, and contribute to greenhouse gas emissions such as methane and carbon dioxide. One way to address this waste is to process it into compost. Natural composting takes approximately three months.

Therefore, an Internet of Things based composting monitoring system was created using a mobile application. The mobile application is used to monitor parameters required for composting, such as temperature, soil moisture, pH, and methane gas levels.

The results obtained from this study are that the composter can produce compost in 23 days. The sensors can accurately monitor the set parameters based on the accuracy value of each sensor, which is > 95%. The user friendliness of the application was evaluated through a questionnaire containing questions based on the System Usability Scale (SUS) and Technology Acceptance Model (TAM) methods, with an average satisfaction score of 90.18%.

Keyword: Mobile Application, Internet of Things, compost.