

## **ABSTRACT**

Efficient and effective waste management in academic environments is crucial for maintaining cleanliness, health, and environmental sustainability. At Telkom University, waste management still faces various challenges, such as inadequate waste sorting and limited supporting facilities. The main problem of this research is how to develop an automatic waste sorting system that can address these issues. This research offers a solution by developing an automatic waste sorting system that utilizes sensor technology and data processing to separate waste into predetermined categories.

This system is designed to enhance the efficiency and effectiveness of waste management on campus and reduce the manual labor involved in the sorting process. The research results indicate that the automatic waste sorting system can improve waste sorting rates compared to conventional methods. Additionally, the system successfully reduced the time required for waste sorting. In conclusion, the development of this system can provide a positive contribution to better waste management efforts at Telkom University.

Keywords: waste management, automatic system, waste sorting.