

## **ABSTRACT**

*Trash bin is a temporary place to collect garbage. which is usually made of metal or plastic. In the room, trash bins are generally placed in the kitchen to dispose of leftover kitchen utensils such as leftovers or used bottles. There are also special paper bins whose used in the office. Trash bins with mixed contents will need more time to sort the trash to make it into the same kind of garbage.*

*Due to the reasons stated above, we need a trash bin that can sort garbage automatically. This final project makes a hardware design for the Smart Trash Bin that can sort the garbage automatically. Namely dry plastic bottles, paper and cans.*

*Based on the test results obtained from testing the tools, Smart Trash Bin is able to distinguish garbage cans, paper and plastic bottles automatically, with an overall accuracy of 84.4%, a precision of 77.7% and a sensitivity of 81.6%.*

*Keywords : Trash, Waste, Trash Bin, Automatic Garbage Sorter.*