SFWRENG 4G06 & MECHTRON 4TB6

Capstone Project – eBin

Group 20

Project Description

A smart garbage bin that is able to recognize the type of garbage (normal garbage or recyclable garbage) and disposes the sorted garbage into corresponding sub-bins.

Project Goals

1. The device will recognize the type of the garbage and sort them into two types (recyclable and others) with at least 80% accuracy, which is greater than sorted by human. This will greatly reduce the cost of the whole waste management process and helps the environment to achieve sustainable development.
2. Provide a more convenient way for users to sort and dispose their garbage. All they need is just put the garbage on the plate and the device will take care of the rest.
3. The operating noise should be lower than 80dB. Since the targeted places are libraries and offices, the device should be quiet enough to not distracting people around.
4. The system should be efficient enough to handle multiple garbage disposed in a short time period, the time for dealing with a single garbage should be less than 6 seconds.
5. Having an educational purpose of providing users with the knowledge of garbage sorting techniques by displaying the type of garbage. The system will also take feedback from users and further improve the accuracy.