# Project Specifications

This project is about an E-bin that gets as input trash and automatically sorts and recycles it. It aims to cut on the time people spend while recycling and stimulate them to do it regularly and effectively.

It is inspired by the idea that AI can help us clean the environment, and find uninvented solutions to the problems we face.

The program gets input from the sensors on the bin which determine what material the trash is made of, its weight, and color. It assigns a name for the material with a priority variable. We can use that variable to sort later the generated trash.

The hierarchy of classes that are implemented is a base class called **Trash,**inherited by two other classes: **Recyclable and Non-Recyclable,** the Recyclable class is inherited by three other classes: **Metal, Paper, and Plastic.**

I am going to use vectors as a main data structure where I will push the sorted trash. In the end, I will save a file with the sorted content of the bin. The sorting algorithm that I am going to use will be QuickSort.