Recycling waste classification using Deep learning

Introduction:

Effective waste recycling is both economic and environmentally beneficial. It can help in recovering raw resources, preserving energy, mitigating greenhouse gaseous emission, water pollution, reducing new landfills. For that reason, we decide to use deep learning for building an automatic classification system for the waste item as either recyclable or not.

Data Description:
The used dataset comes from GitHub, has six classes: glass, paper, cardboard, plastic, metal, and trash. Where the original dataset consists of 2527 images, in this project.
 https://github.com/MostefaBen/Trash-classification

Tools and hardware:

Here the tools and hardware that will be initially uses in this project:
Raspberry Pi 4, Camera V2, Google Colab, Pandas, Numpy, Seaborn, Fastai.