

Instructions to Download Data

Due to size limitations, the dataset used in this analysis is not included directly in this repository. However, you can easily access and import the dataset by following the instructions below:

Dataset Overview

The dataset used is the [TrashNet Dataset](https://huggingface.co/datasets/garythung/trashnet) (<https://huggingface.co/datasets/garythung/trashnet>), hosted on Hugging Face. This dataset contains images of trash items categorized into six classes: cardboard, glass, metal, paper, plastic, and trash. The images were generated in a controlled environment:

- Objects were placed on a white poster board under natural sunlight or room lighting.
- All images were resized to 512 x 384 pixels.
- Therefore, no additional data cleaning is required as the dataset is high quality and ready for analysis.

How to Access the Dataset

Option 1: Download Directly from Hugging Face

1. Visit the dataset page: [TrashNet Dataset](https://huggingface.co/datasets/garythung/trashnet).
2. Click on the "Download" button to download the dataset manually to your local system.
3. Unzip the downloaded file and move it to the appropriate directory for your project.

Option 2: Load Directly Using the Hugging Face API (Preferred)

If you're working in a Jupyter Notebook or a Python environment, you can use the Hugging Face `datasets` library to directly load the dataset into your project:

1. **Install the Required Library:** If you don't already have the `datasets` library installed, you can install it by running:

```
pip install datasets
```
2. **Import and Load the Dataset:** Use the following code snippet to load the dataset directly:

```
from datasets import load_dataset  
dataset = load_dataset("garythung/trashnet", split="train")
```
3. **Proceed with Analysis:** Once loaded, the dataset is ready for use. No additional data cleaning is necessary.