

Automated Waste Sorting Bin

Software Installations :

1. Update your Raspberry Pi

sudo apt-get update

sudo apt-get upgrade

2. Install Python and pip if not already installed

sudo apt-get install python3 python3-pip

3. Install required Python packages

pip3 install RPi.GPIO

pip3 install Adafruit_GPIO.SPI

pip3 install flask

pip3 install Adafruit_MCP3008

4. Create a project directory

mkdir waste_sorting

cd waste_sorting

5. Create a templates directory for web files

mkdir templates

Project Setup :

1. Create the main Python file:

nano waste_sorting.py

2. Copy the code into this file.

3. Make the script executable:

mod +x waste_sorting.py

Running the Project :

1. Start the system:

`python3 waste_sorting.py`

2. Access the web interface:

3. From the same Raspberry Pi: `http://localhost:5000`

4. From other devices on the network: `http://[raspberry_pi_ip]:5000`

To find your Raspberry Pi IP: `hostname -I`

Screenshots :

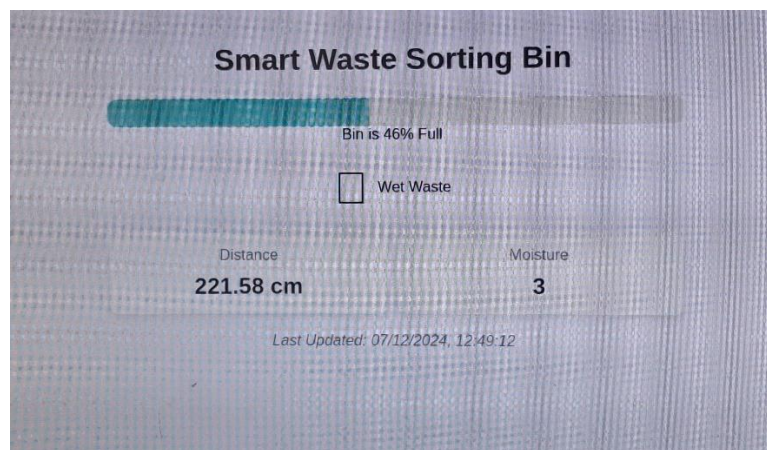


Fig. Wet waste segregation

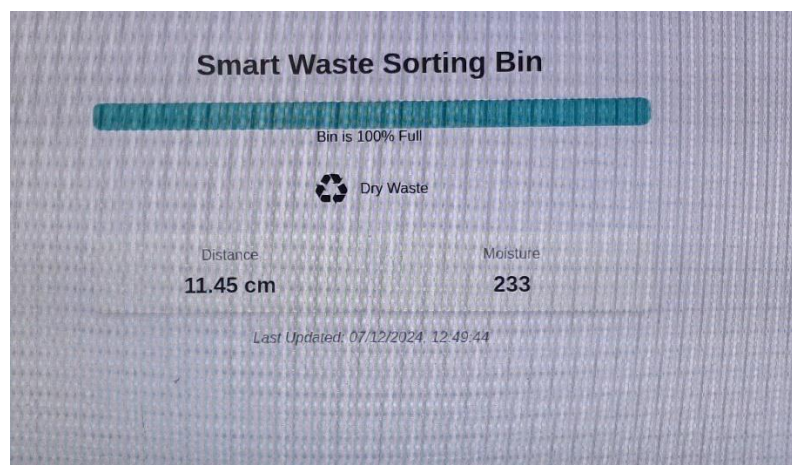


Fig. Dry waste segregation

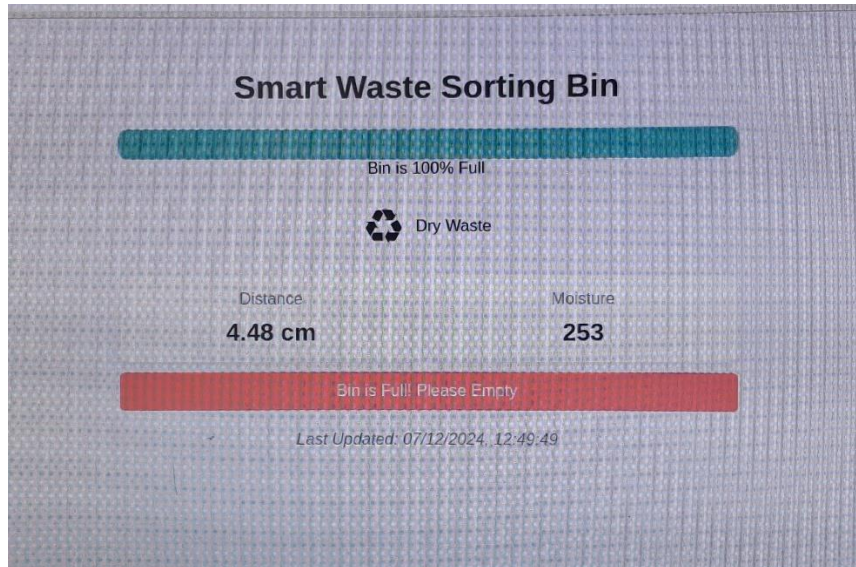


Fig. Bin full alert