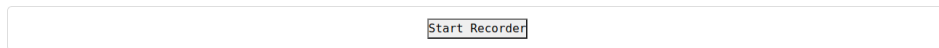


## *User Guide*



Click on the **start recorder**, at the same time, you throw the rubbish on the floor or a plane. This is the emulation of the real can system, when you throw the rubbish into the can, the system work, record the voice about a primed of time of rubbish hit the plane.

Then,



The voice will stop and record the voice ,you can play it, then click the **Detect audio!**, it will start classification.

Next,



The system will show the result of the rubbish, and show the gratitude and give you a report about how your work help to protect the environment.

## ***How to install the system***

1. Download the IRS-PM-2022-09-08-IS04FT-GRP15EZSORT-Intelligent\_Garbage\_Classification\_Motivator,
2. Install the package below (can use the pip install -r requirements.txt )

b64decode  
numpy  
CORS  
Flask  
noisereduce  
hmmlearn==0.2.2  
python\_speech\_features==0.6  
cvlib==0.2.7  
pandas==1.4.0  
Pillow>=9.0.1  
numpy==1.19.3  
Jinja2==3.1.2  
opencv-python==4.6.0.66  
nest-asyncio==1.5.5  
Flask-PyMongo==2.3.0  
pymongo==4.2.0  
keras  
tensorflow==2.10  
hmmlearn==0.2.2  
3. Install the node and npm

### ***How to start the system,***

IRS-PM-2022-09-08-IS04FT-GRP15EZSORT-Intelligent\_Garbage\_Classification\_Motivator, you can go into the file **/IRS-PM-2022-09-08-IS04FT-GRP15EZSORT-**

**Intelligent\_Garbage\_Classification\_Motivator/client/**, then use the command “npm run serve” to start the front end,

Then go into the file **/IRS-PM-2022-09-08-IS04FT-GRP15EZSORT-**

**Intelligent\_Garbage\_Classification\_Motivator/server/**, then use the command “python app.py” to start the back end.

Use safari to visit **http://127.0.0.1:8080/**.