

Autowastagator

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PROBLEM STATEMENT









Problem Statement

Environment degrading over the years

•The environment has degraded a lot in the past decade and improper waste management has a big role to play in it.



Waste Segregation This concept and its benefits were explained and promoted. People knew now that separating the waste into categories could help us do our share in saving the world.



Awareness Campaigns

 People started segregating waste, thanks to these campaigns. Slowly, waste segregation became mandatory in places, and it was starting to become a part of the lifestyle.



Giving in

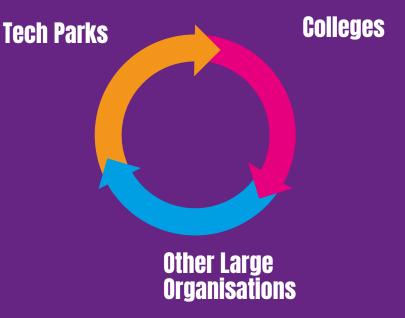
 When people were busy, or tired, the environment didn't seem so important to humans anymore.
 Hence a solution has to be found!

PROPOSED SYSTEM



AUTOWASTAGATOR!
A model that
segregates wet, dry
and plastic waste
automatically!

Target users



FLOWCHART

Video Stream as input

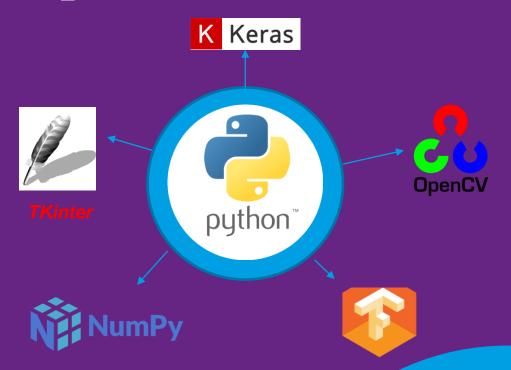
The video is split up into frames

Predictions are made on the frames of the video by the model

A waste classification report is generated with the prediction results

The report is then mailed to the user/organisation.

Technology Stack



Dataset Sources

Thung and Mindy Yang's (TrashNet) Dataset

Kaggle Waste

Total of approximately 26,000 images!

Classification Images



Accuracy 71%

What Sets Us Apart?

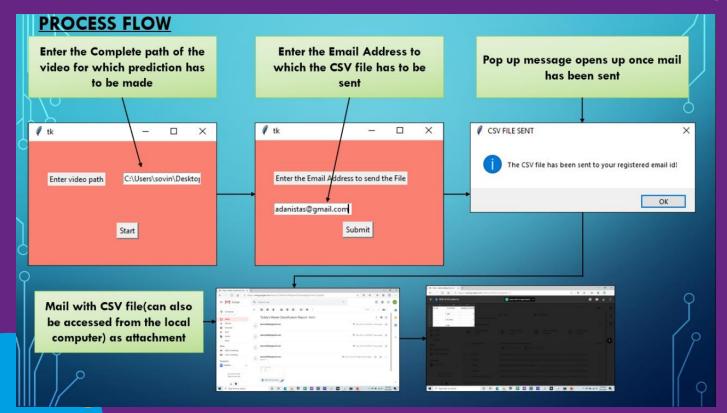


Waste Classification Report
Analysis of data to impose
safe disposal of trash



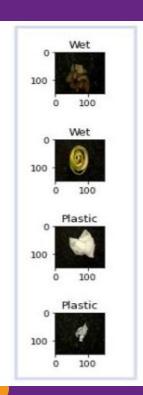
Trash can be automatically segregated with very less human intervention!

Demonstation of Project

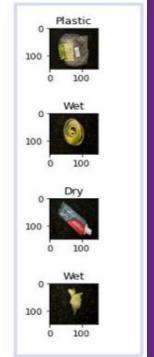


Visualisation of Predictions







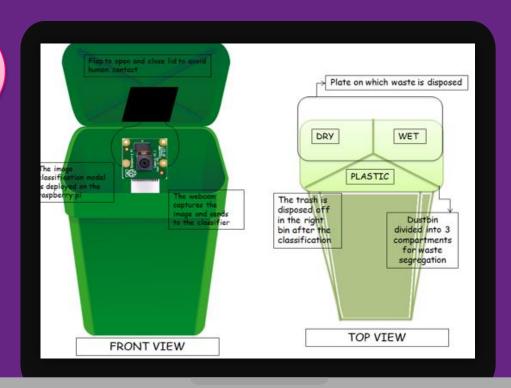


As we can see, our model got all 16/16 predictions right!

Convert the data collected into a format easier for analysis

Future Implementation

Real time waste segregation process



 Our model can be deployed onto the board to automate the dustbin

> Raspberry Pi board

Real time classification

 Instead of a video input, the model can be developed to work on real-time feed from camera The data can be converted into formats for easier analysis

Data format

Future Implementation

Link to our GitHub repository:

https://github.com/Sonali2824/AUTOMATIC-WASTE-SEGREGATOR

Link to our Instructions and Guide:

https://drive.google.com/file/d/1NkXdsCRu6NgmVau9nOVZkz-BKu4ltk7D/view?usp=sharing

Link to our video with respect to the project:

https://drive.google.com/file/d/1t1j0kn3CWUSTD1A_iWmT14-93GGKXwMj/view?usp=sharing

Meet the Team

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Thank you!