

BU Sustainability: Understanding How Weather Impacts Waste

(Team2)

Spring 2023 CS506 Data Science

Contact Information

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Weekly Scrum Report:

1. What is the project focus/overall goal?

Main goal is to reduce waste storage by applying DataScience.

Confront of fickle and severe weather, dealing with landfill has become a challenge. To facilitate BU Sustainability's waste storage strategy in changeable weather, we will introduce an algorithm by applying a Data Science method.

2. Why is this project important?

Sustainability and going green is one of the main goals towards a better future and Using Data science can help us classify types of waste and predict when it possibly can be overfilled, making the recycling process more efficient and effective. By analyzing data from the 3d party vendors data science can help identify bottlenecks, inefficiencies, and areas where waste is being generated. This information can then be used to optimize the supply chain and reduce waste. Help optimize waste management processes and reduce waste.

3. What type of data will you collect or be analyzing?

Data from 3rd party waste management companies and data from waste plants, including detailed data sets from each monitor, overall data, temperature data, and waste generation spreadsheet.

4. What are potential limitations of the project?

Firstly, feature extraction of useful data from over a hundred dataset files itself is a challenge.

Secondly, data might be insufficient or not accurate, there might be no correlation with weather. Though we have over a hundred files, there is no guarantee that we would get enough amount of good data with clear ground truth. Nowadays most of the models are data driven, the better performance we want, the more data of good quality is required.

Thirdly, real-world problems are hardly 100% relevant to Data Science models, designing an algorithm with full interpretability of this particular problem, waste storage improving, is rather arduous.

5. What are your next steps? Divide tasks amongst the team

Get used to data, see patterns, discuss strategies, split patterns to check by team members before the next meeting.

After the first client meeting, we will do requirements analysis and draw a craft of design documents.

Then we will divide the project into many stages, conquering them step by step in a collaborative way.

During the system implementation, we will meet with our client frequently, updating requirements.

When our system is finished, we will test it with various data, refining it until fulfilling.