



ABSTRACT:

This document describes the process of doing a descriptive analysis on the Metro transportation authority that aims to help analyse all stations in the New York area to help better the customer experience and give them a smoother ride and help the MTA target big companies to advertise at their most crowded stations.

Business Need:

Our purpose of this descriptive analysis is to find the most and least crowded stations, In order to improve customer experience, Getting in and out of a station easily, Find the best time to scheduled maintenance day and cleaning time and help bring big companies to advertise at the most crowded stations.

Approach or Methodology:

We picked up twelve weeks worth of data from MTA website, and it started from 10/07 to 25/09 , we did a data cleaning and we removed extra space in columns, and we found a lot of duplicate datas and null values and a lot of outliers, which we also removed, We added 3 columns Traffic, actual entry and actual exit. to help us in our purpose, we choose those libraries to help us, pandas and numpy to read and clean the data and matplotlib and plotly to visualize the data and come up with our conclusion and assumption.

Analysis:

We analyzed the data, and we found the number of entries, exits, and traffic for different time and day for each station. These information helped us to schedule the right day of the week for maintenance day and the best time of the day for cleaning time. By using the libraries mentioned above for

visualization (Plotly, and Matplotlib). Additionally, this information allow us to do advertisements with such big companies who is looking for a very crowded areas.

Result:

We found the top 15 most crowded stations that we will bring big companies to advertise there, and we found the least crowded stations that need to be looked. We also found the most and least crowded day of the week and the most and least crowded time of the day in the twelve weeks of data.

Recommendations:

Our recommendation for the MTA is to add more turnstiles in the top 15 most crowded stations in order to make it more smoothly for customers to get in and out of the stations. They can also add a new control area, Also they can improve their app to have a better response time and include a smart access that for sure will help our business needs.

Faisal Alasgah
Samer Alatwi