EDA Project Write-up

Placing bike lockers at MTA stations

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Abstract

My goal was to help the fictional company Wheel Docker determine what MTA stations would be the best locations to launch their commuter "wheel" storage units in NYC. This involved picking a suitable borough, The Bronx, and investigating what Bronx stations had the highest volumes of commuter traffic (entries in the morning and exits in the evening). I worked with data provided directly by the MTA. This project involved doing initial exploratory data analysis, data cleaning, refining, and finally some basic data visualization. I provided Wheel Docker with a list of 10 recommended stations based on my analyses.

Design / Backstory

My goal was to market my skills to a fictional company, Wheel Docker, to assist them in determining where best to place their product. Wheel Docker designs lockers that safely allow commuters to store their "wheels" (bike, scooter, electric unicycle, etc.) when they're not using them. These "Dockers" can be leased by local businesses or public transit agencies (such as the MTA), to earn extra revenue and provide customers with safe storage. I worked with data provided directly by the MTA to take a look into stations that would best for Wheel Docker to target in their initial rollout.

Data

My data source was the MTA turnstile data (hyperlink) for the months of April - September, 2019. I also took a quick peak into 3 months of data from 2021 (July – September) to see how MTA traffic looks now.

Algorithms

I performed a thorough Exploratory Data Analysis of the MTA turnstile data; cleaned, explored, aggregated, and visualized the data so as best to support Wheel Docker in the rollout of their product in the NYC Bronx.

Tools

- SQLite and Pandas for data exploration and cleaning
- SQLite, NumPy, and Pandas for data manipulation
- Matplotlib and Seaborn for plotting

Communication

All slides have been uploaded to my personal Github account at

https://github.com/ericajstevenson/METIS_projects under “NYC MTA analysis”