

MTA Traffic Analysis for Esport Team Cheetah

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Introduction

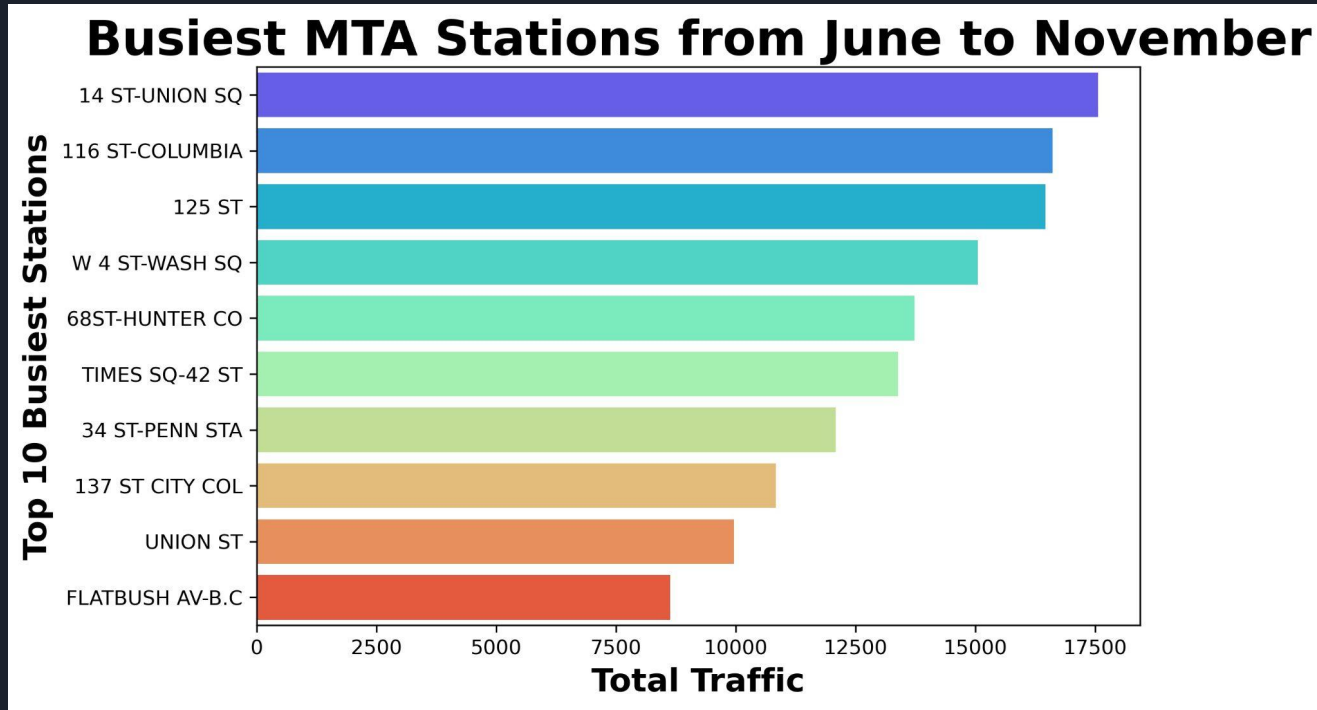
- Esports team Cheetah is holding a gaming event in March and hopes to invite as many interested gamers, working professionals, and students as possible.
- Cheetah team intends to place electronics advertisements at specific NYC subway stations to promote their event to gamers, working professionals, students, and anyone else interested
- **Agenda:** analyze MTA subway data on traffic flow to optimize placement and time of the advertisement to maximize awareness to target demographics: gamers, working professionals, and students



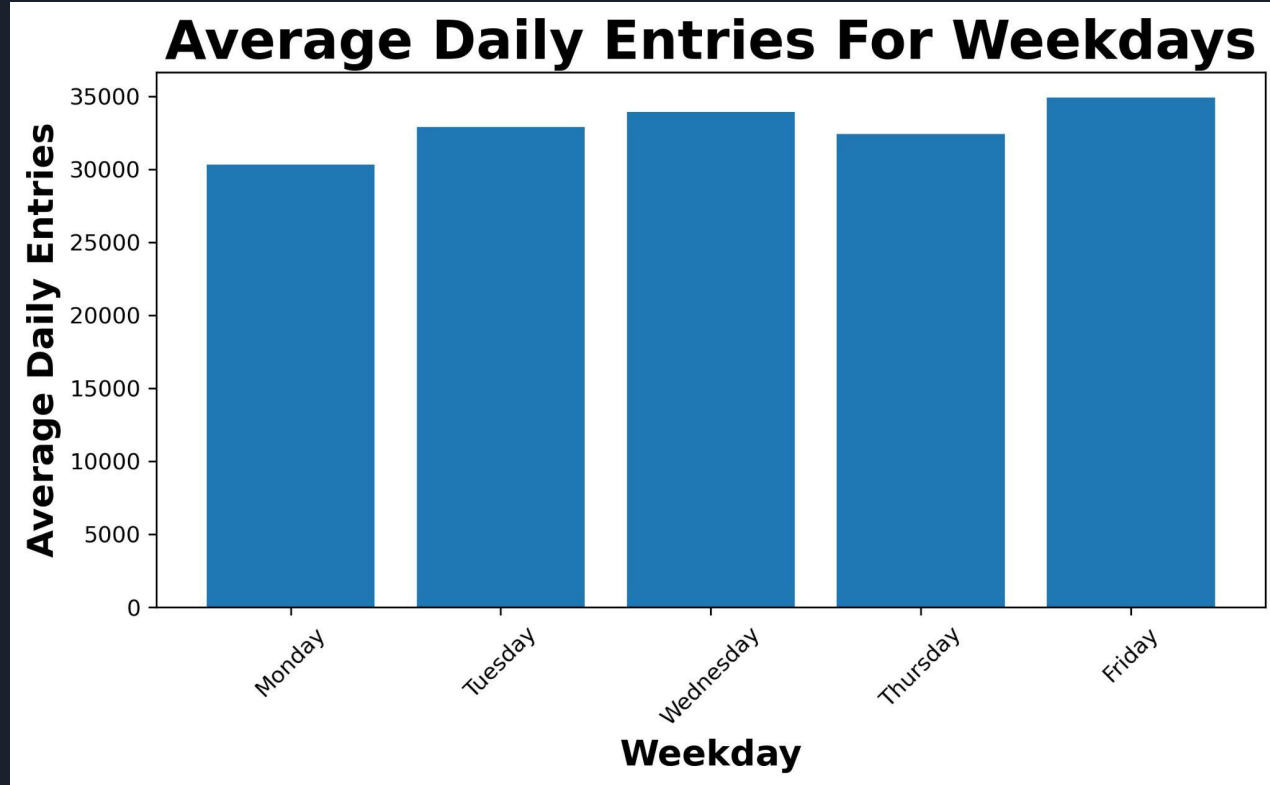
Methodology

- Data
 - MTA Turnstiles Data (MTA)
 - Additional Data: Colleges and Universities near NYC subway stations, OpenStreetMap
- Tools:
 - Python, Pandas, Numpy, SQLAlchemy
 - Matplotlib, Seaborn, geopandas/geoplot, folium
 - Github

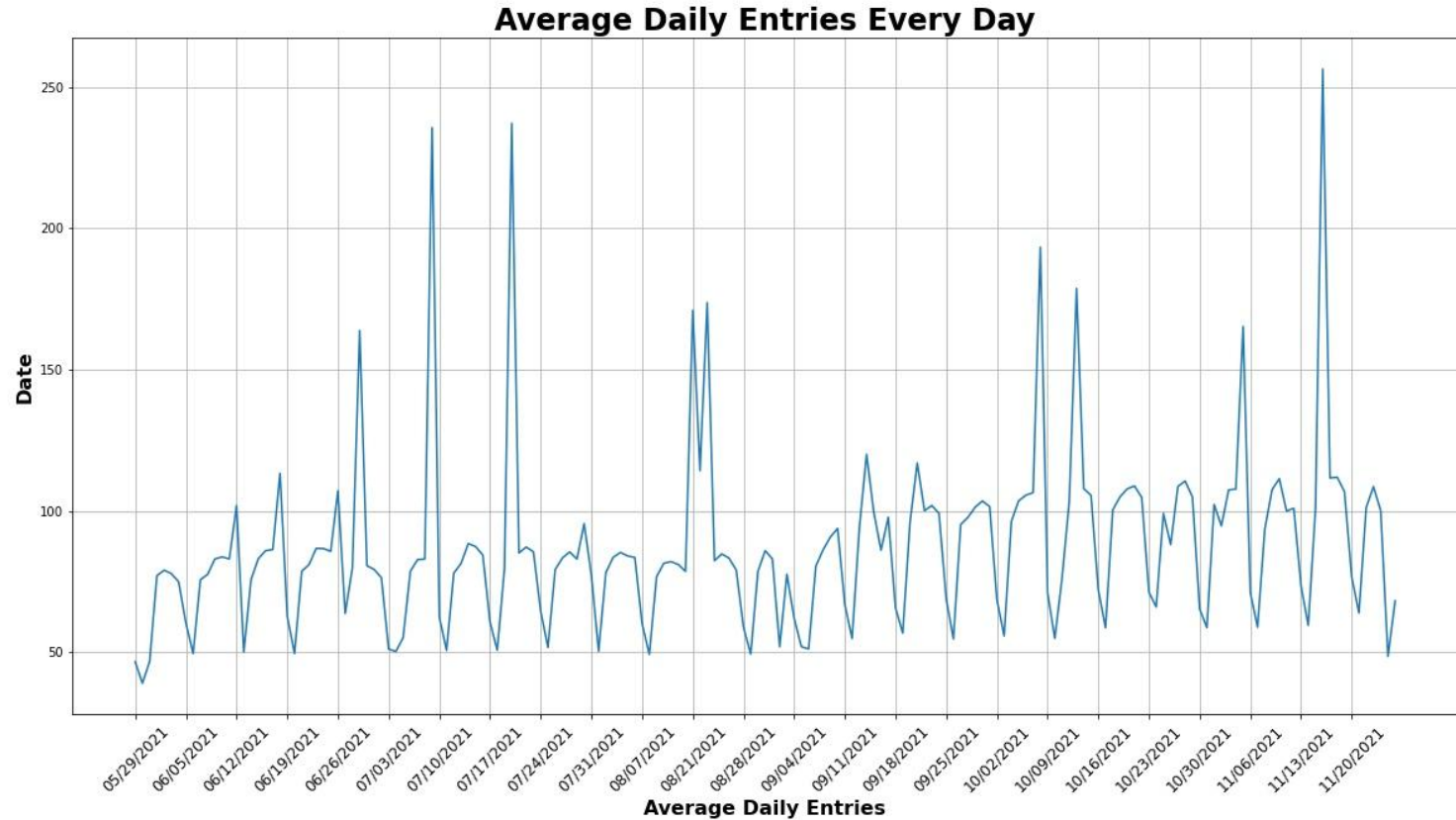
Top 10 Busiest Stations near target demographics



Average Daily Entries of Weekdays



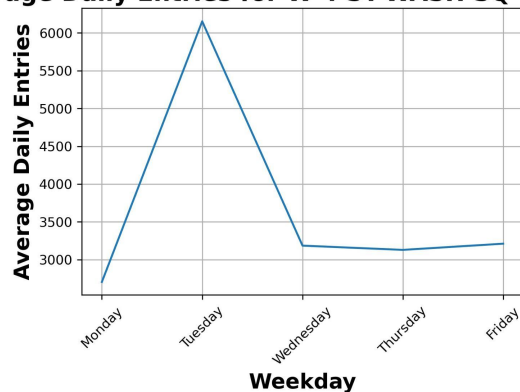
Average Daily Entries for Every Day



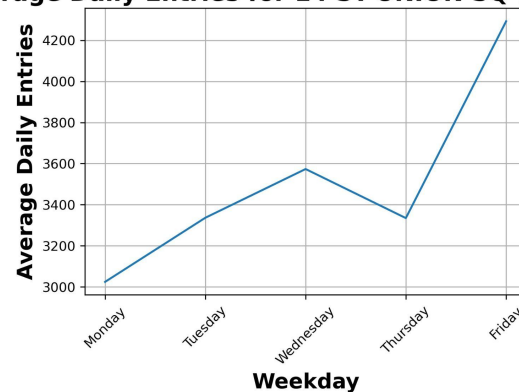


Average Daily Entries for Top 5 Stations

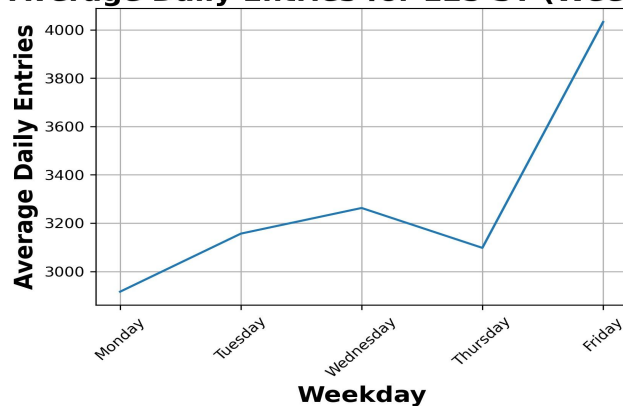
Average Daily Entries for W 4 ST-WASH SQ (Weekday)



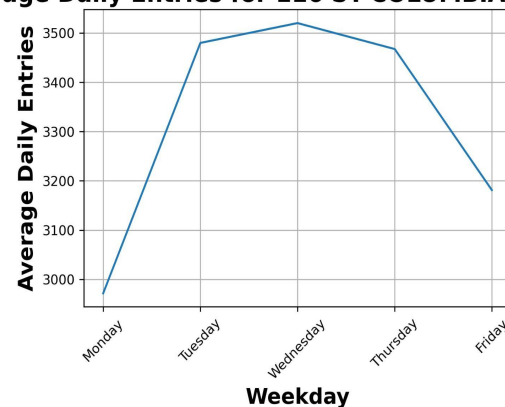
Average Daily Entries for 14 ST-UNION SQ (Weekday)



Average Daily Entries for 125 ST (Weekday)



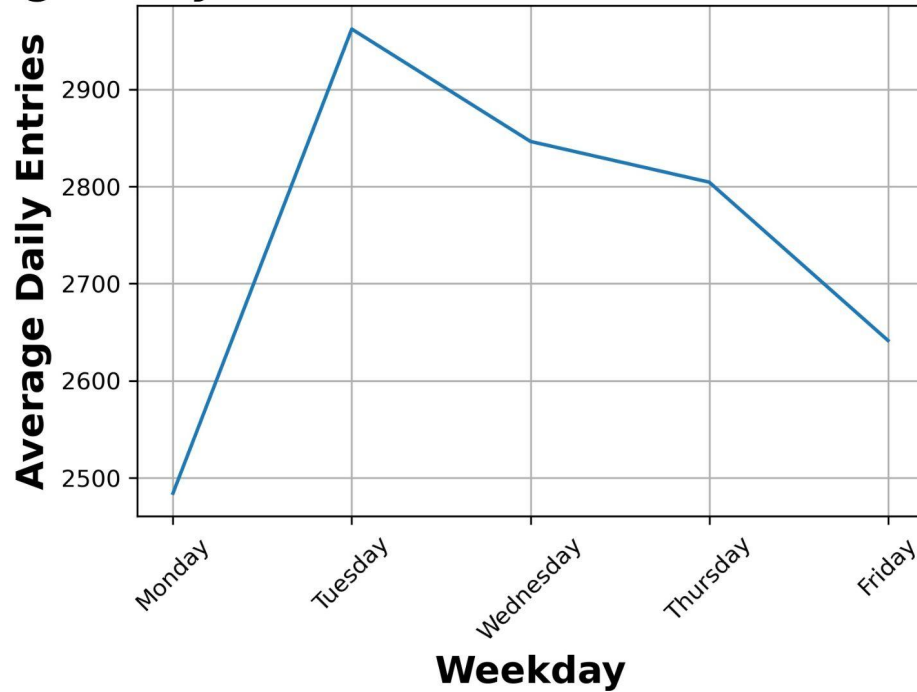
Average Daily Entries for 116 ST-COLUMBIA (Weekday)



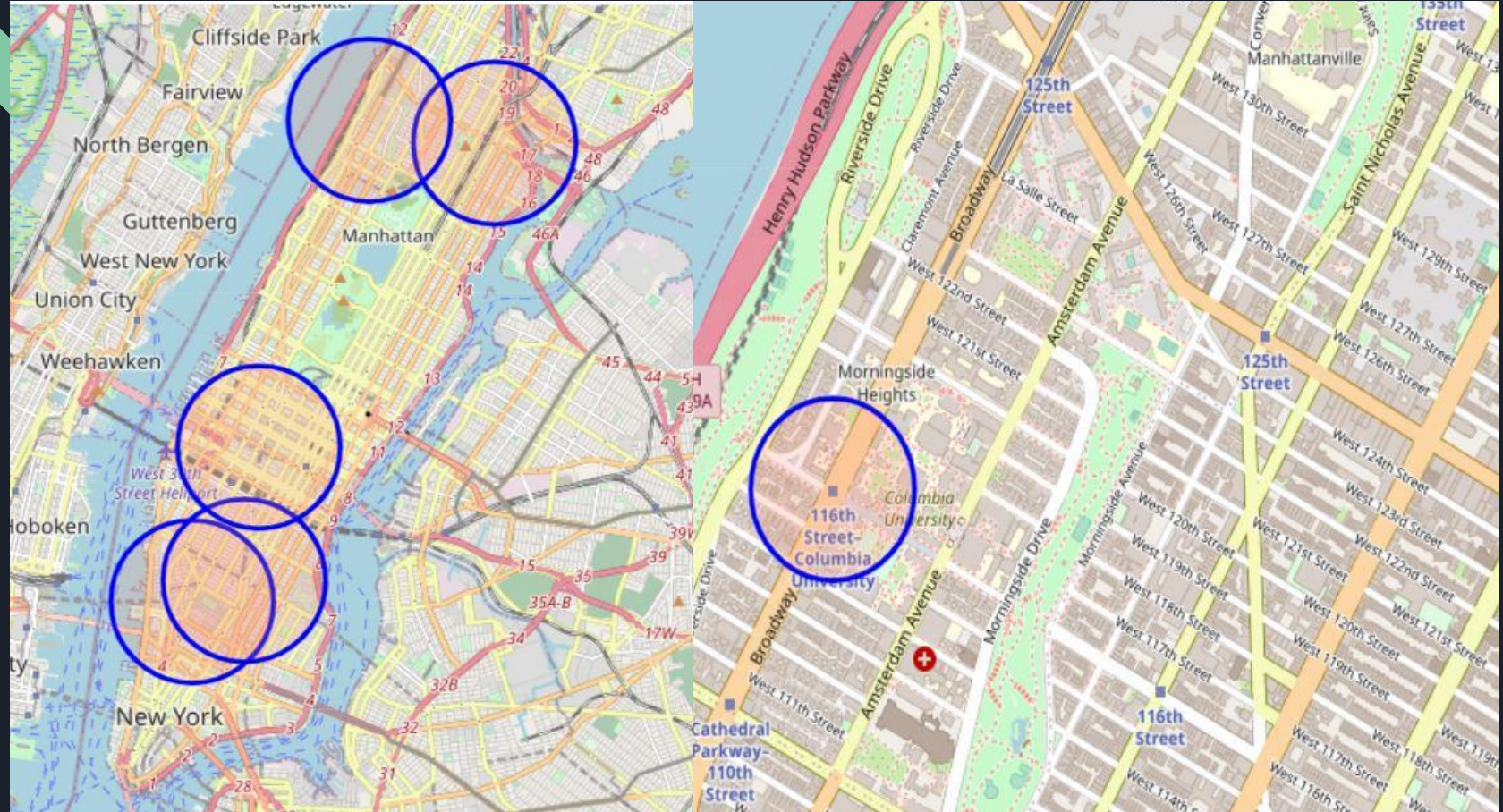


Average
Daily
Entries for
Top 5
Stations

Average Daily Entries for 68ST-HUNTER CO (Weekday)



Geographical Map of Top Stations





Conclusion

- Top stations close to universities and working professionals
- Put electronic advertisements in these stations:
 - W 4 ST -WASH SQ
 - 14 ST-UNION SQ
 - 125 ST
 - 116 ST-COLUMBIA
 - TIMES SQ-42 ST
- During Mondays, Tuesdays, and Fridays



Future Work

- Plotting location of tech companies and universities
- Proximity of stations and tech companies and universities
- Weekend commutes vs Weekday commutes
- Compare top stations and possible demographic targets as well as number of tech companies and universities located near the station



Appendix

- Time period: June to November
- Data cleaning: Fixing some outliers that do not present normal daily traffic behavior within a week (weekdays specific)
- Reason for selecting the stations:
 - Proximity to working professionals and universities
 - Outliers-tourism

Thank you

