WomenTechWomenYes

Street Team Analysis and Recommendations

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Background and Purpose

Background and Purpose

- WomenTechWomenYes (WTWY)
- Increasing awareness and outreach
- Increasing Summer Gala interest and attendance
- Improve street teams at subway entrances success rates

Methodology

Approach

- Target demographic
- Recommend MTA stations by:

  Ranking stations by four selected attributes

Data Sources

MTA

- March 23, 2019 - June 1, 2019
- Station traffic

American Community Survey

- Census tracts
  - Female population
  - Income
  - Education Level

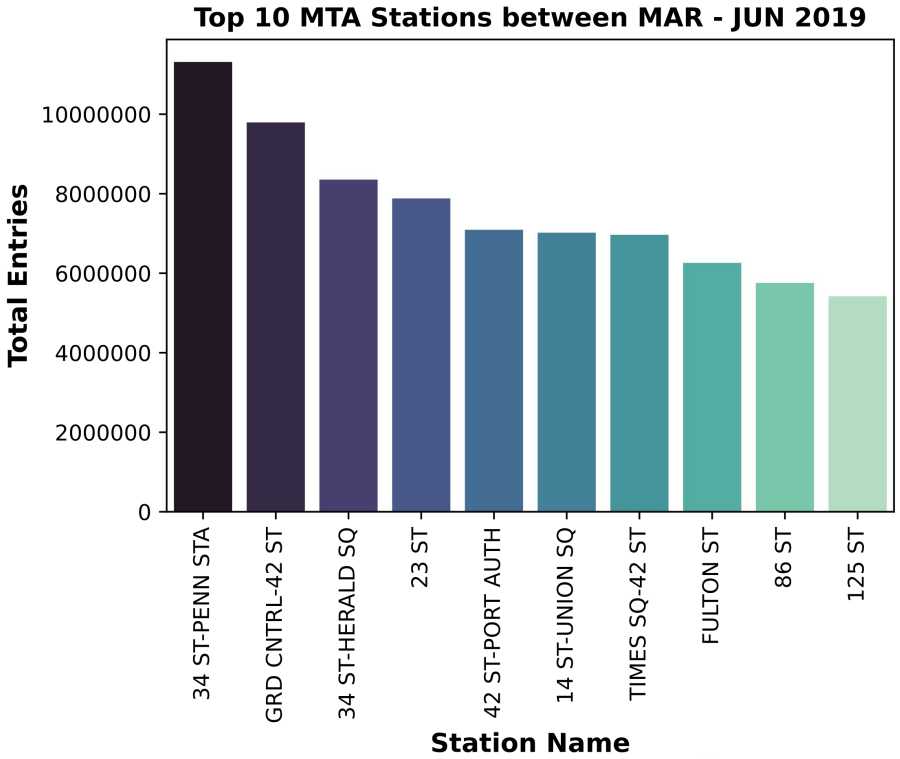
NYC Open Data

- MTA station locations/coordinates

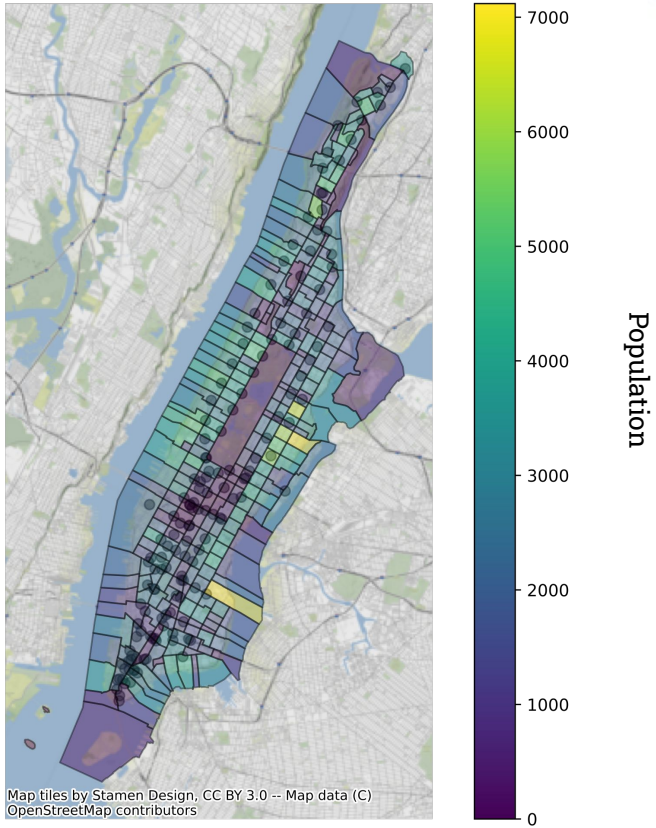
** See Appendix B for tools utilized*

Findings

Top MTA Stations by Entries



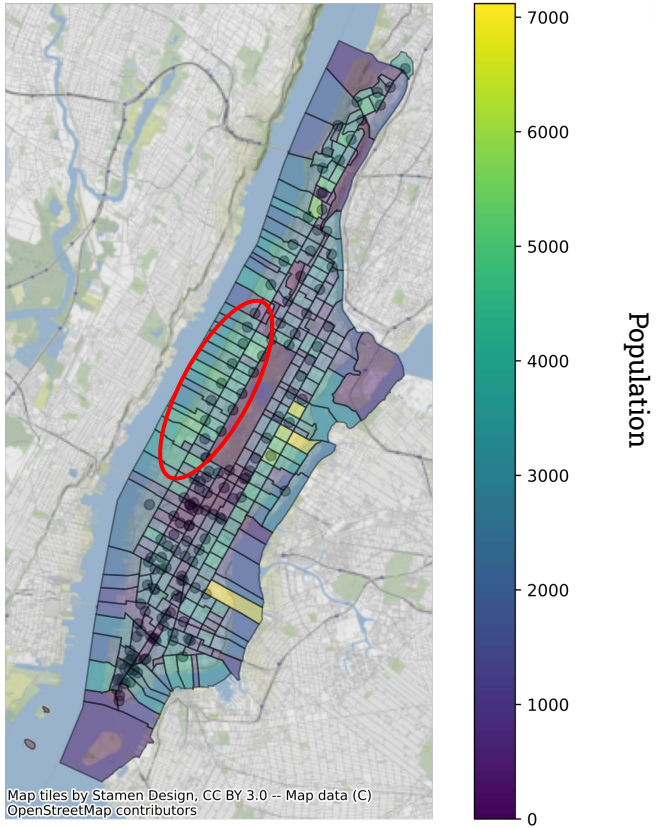
Female Population - 25 years and over



* Data grouped by Census Tracts

● MTA Subway Station

Female Population - 25 years and over



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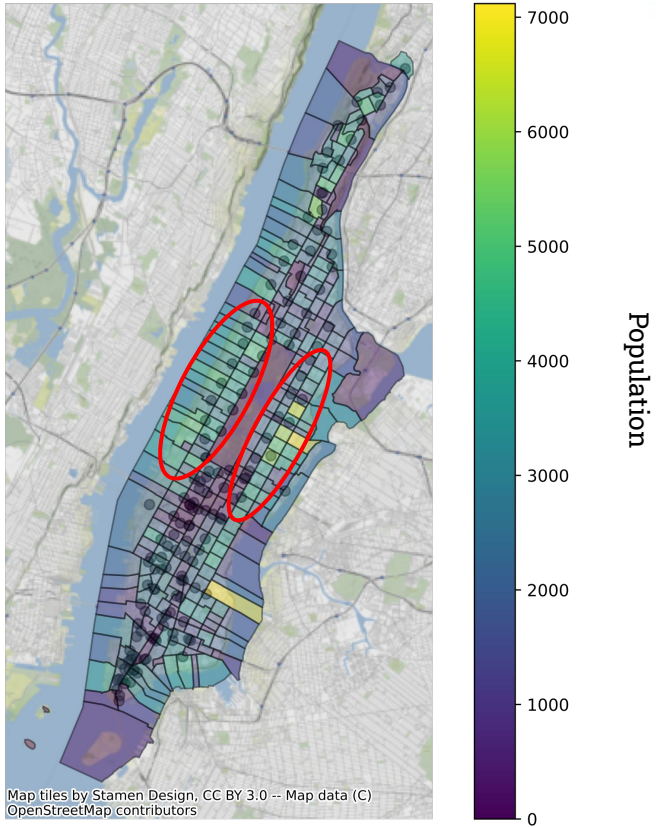
● MTA Subway Station

Female Population - 25 years and over



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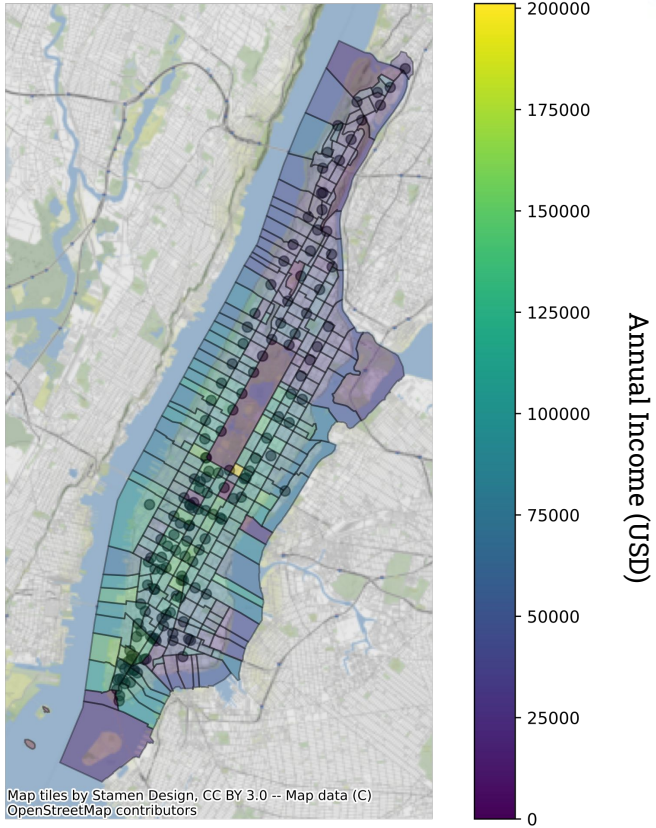
- MTA Subway Station

Median Income - 25 years and over



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● MTA Subway Station

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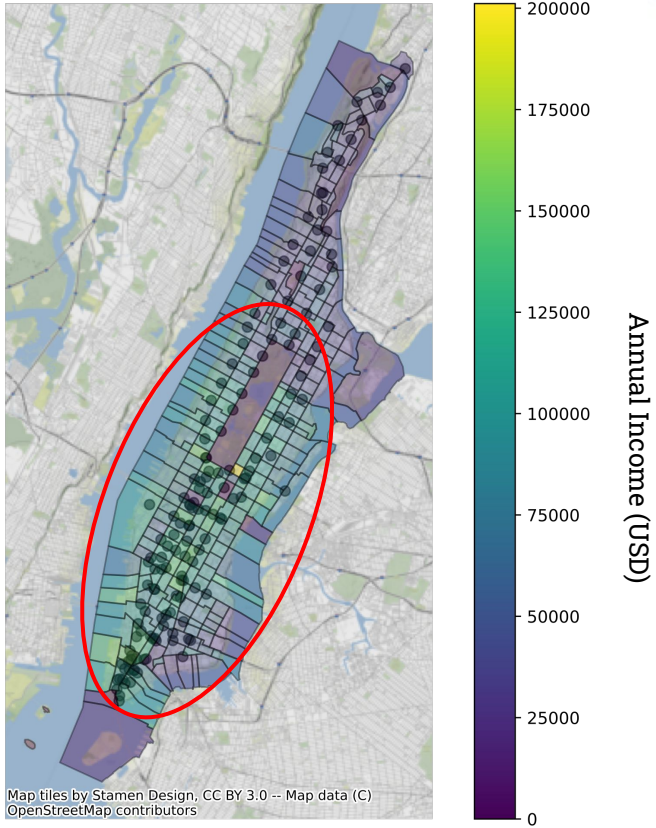
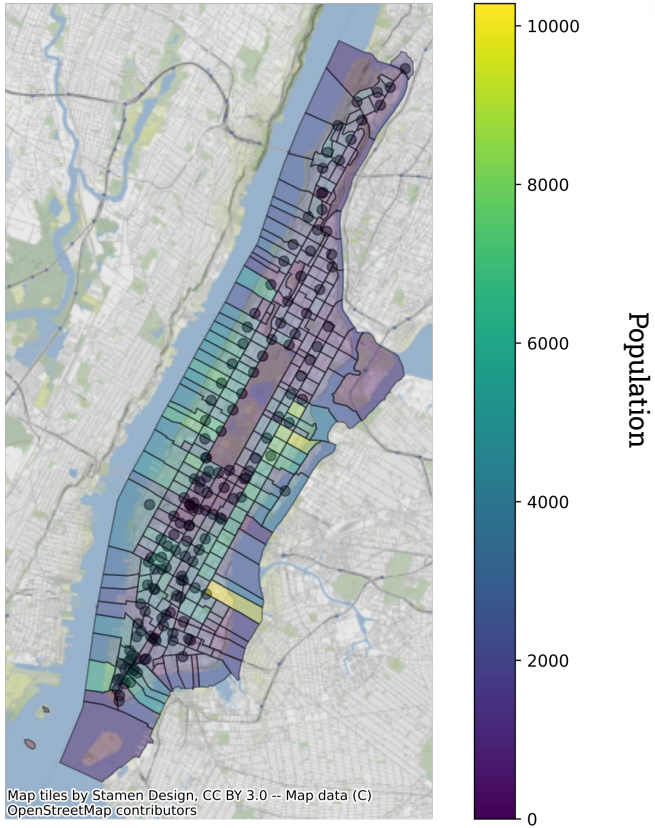


*** Data grouped by Census Tracts**

- MTA Subway Station

Population 25 years and over w/ Advanced Degree



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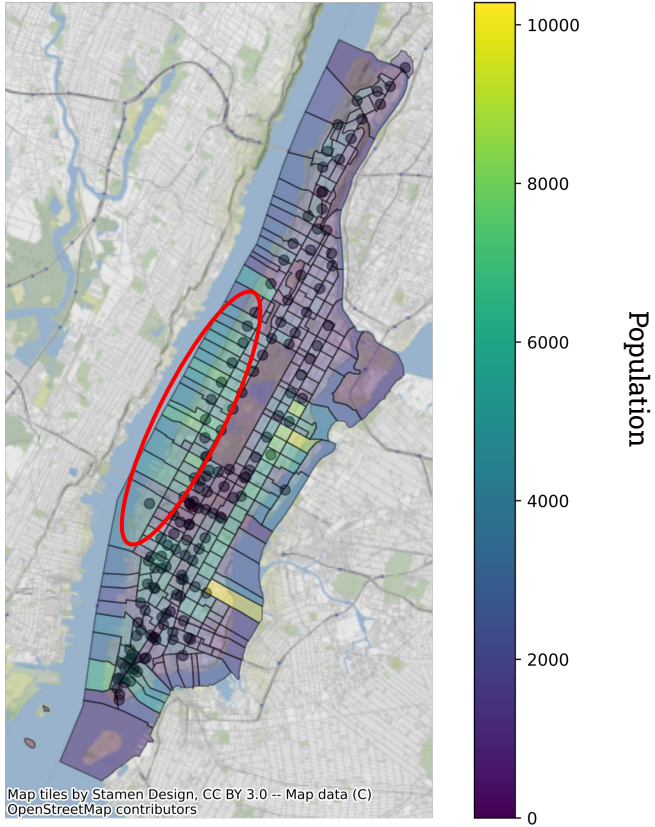

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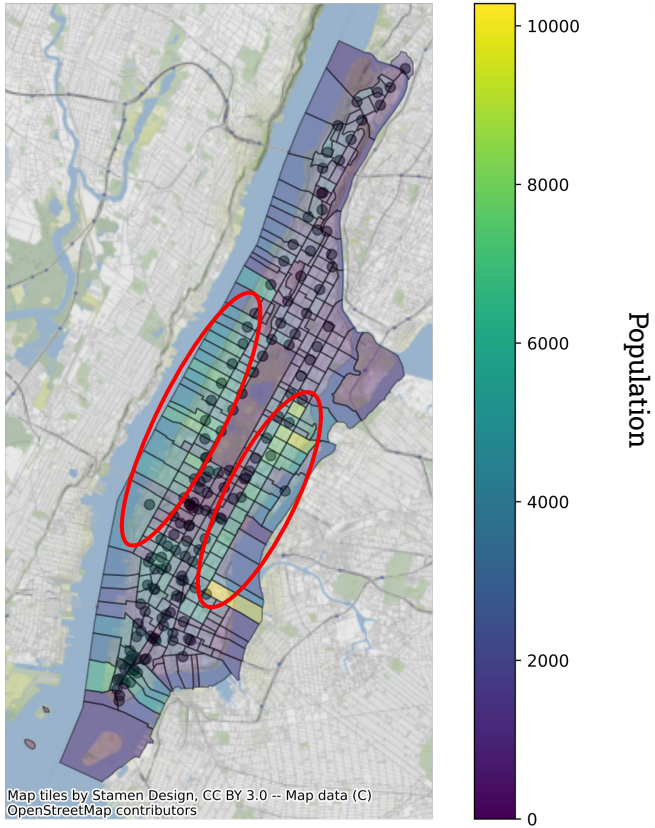

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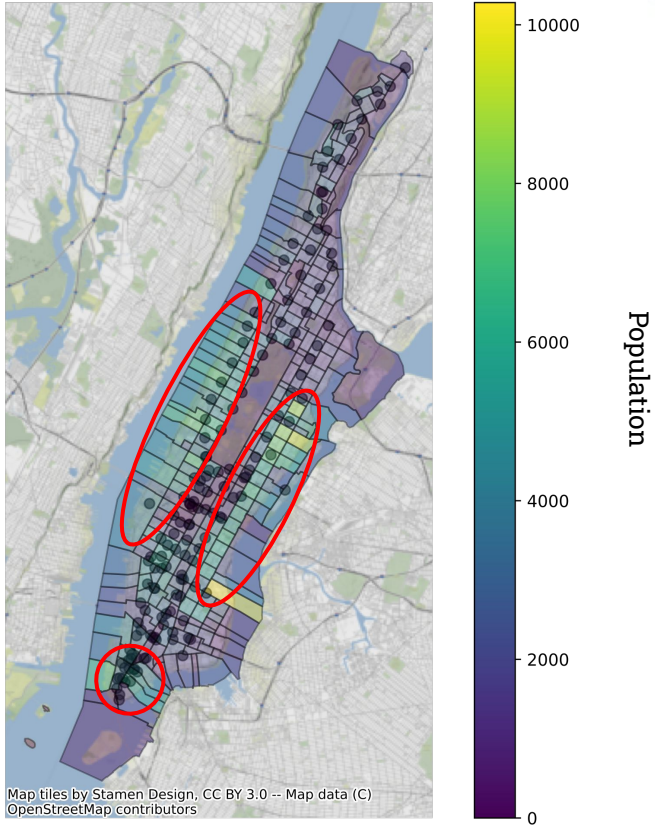

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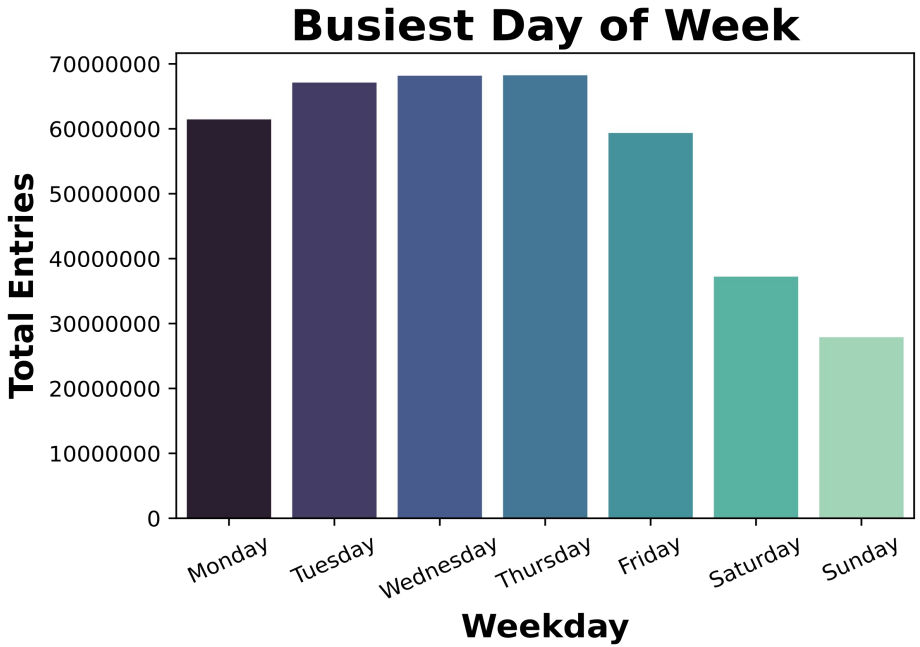
● MTA Subway Station

Busiest Days of the Week



* See Appendix C for examination of individual turnstile data for daily entries and more in depth analysis of daily entries for a top 10 station

Recommendations

✅ Ranked with Census Data

Rank	Station
1	23rd St
2	Fulton St
3	59th St - Columbus Circle
4	14th St
5	34th St - Penn Station
6	Wall St
7	Grand Central - 42nd St
8	Chambers St
9	World Trade Center
10	Lexington Ave - 53rd St

❌ Ranked without Census Data

Rank	Station
1	34th St - Penn Station
2	Grand Central - 42nd St
3	Herald Sq - 34th St
4	23rd St
5	42nd St - Port Authority Bus Term
6	Union Sq - 14th St
7	Times Sq - 42nd St
8	Fulton St
9	86th St
10	125th St

Future Work

- Include data on tech company and higher education institution locations
- Schedule street teams by busiest times of day
- Cluster targeted stations to increase labor efficiency
- Investigate effects of weather on station traffic

Thank You

Questions?

Appendix

Appendix A: Data Links

Data Sources:

MTA

American Community Survey (Census Data)

NYC Open Data - Subway Stations

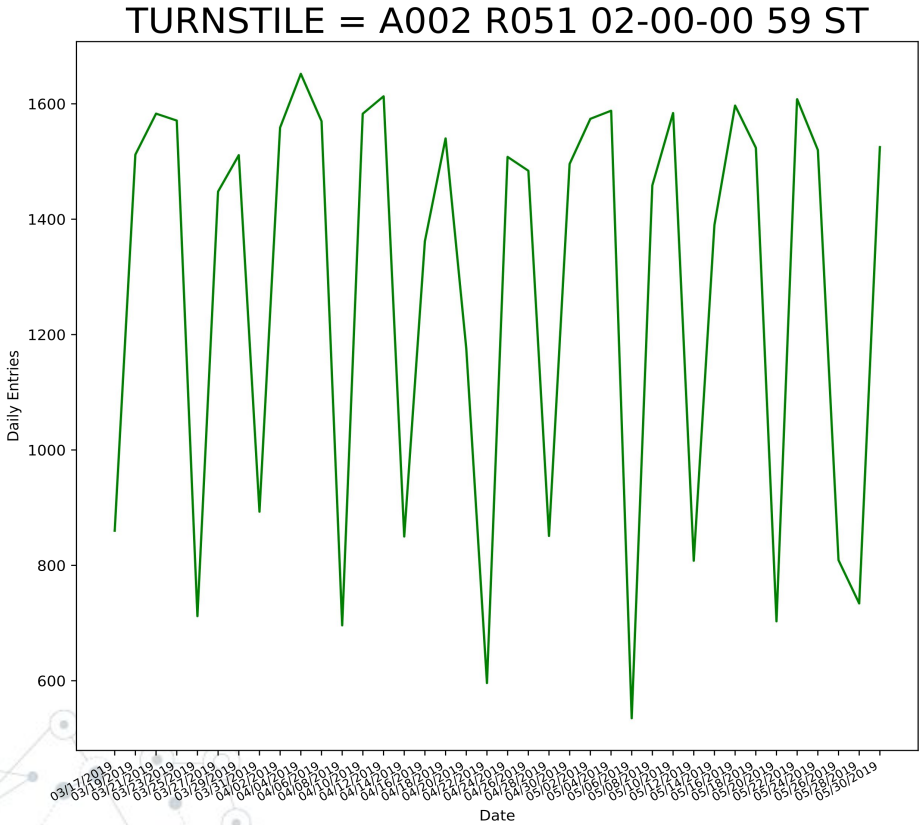
Algorithm Used:

Composite Ranked Score

Appendix B: Tools Used

- Numpy
- Pandas
- Pickle
- Matplotlib
- Seaborn
- Geopy/Geopandas
- FuzzyWuzzy

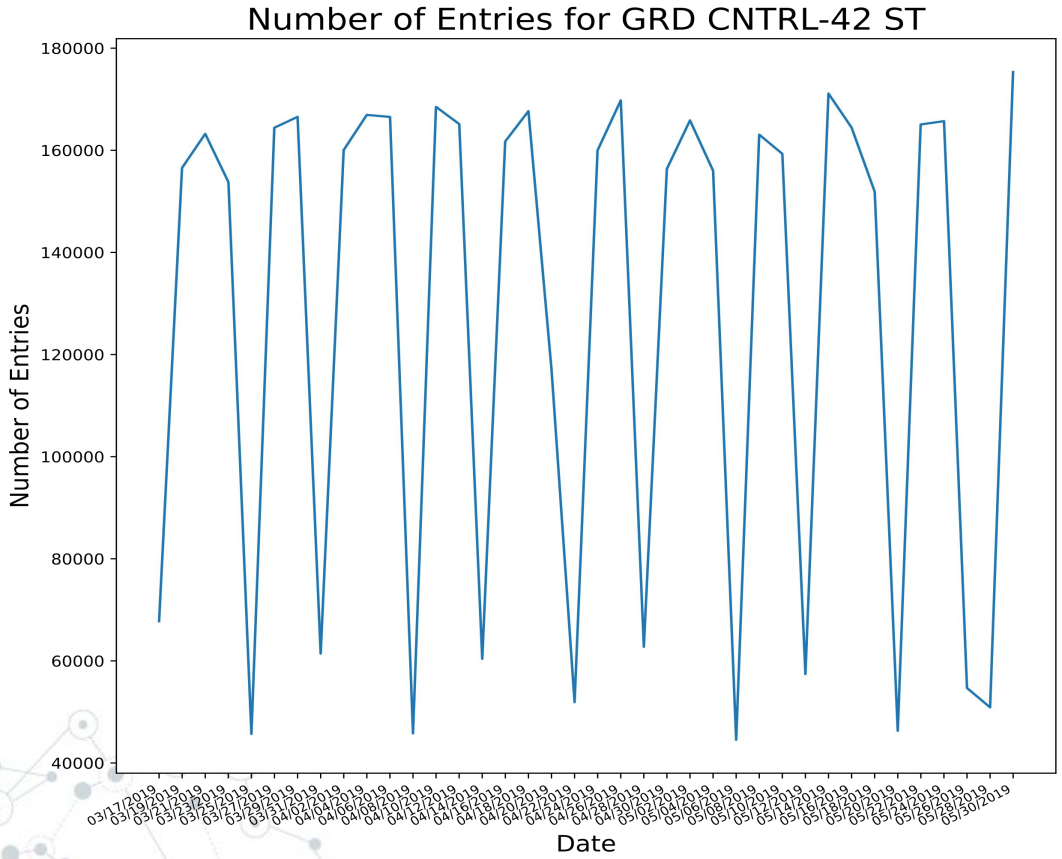
Appendix C:
Examination of Individual Turnstile Data for Daily Entries



Key Takeaways

- Showing strong pattern for day of week

Appendix C:
Examination of Daily Entries on a Single Station



Key Takeaways

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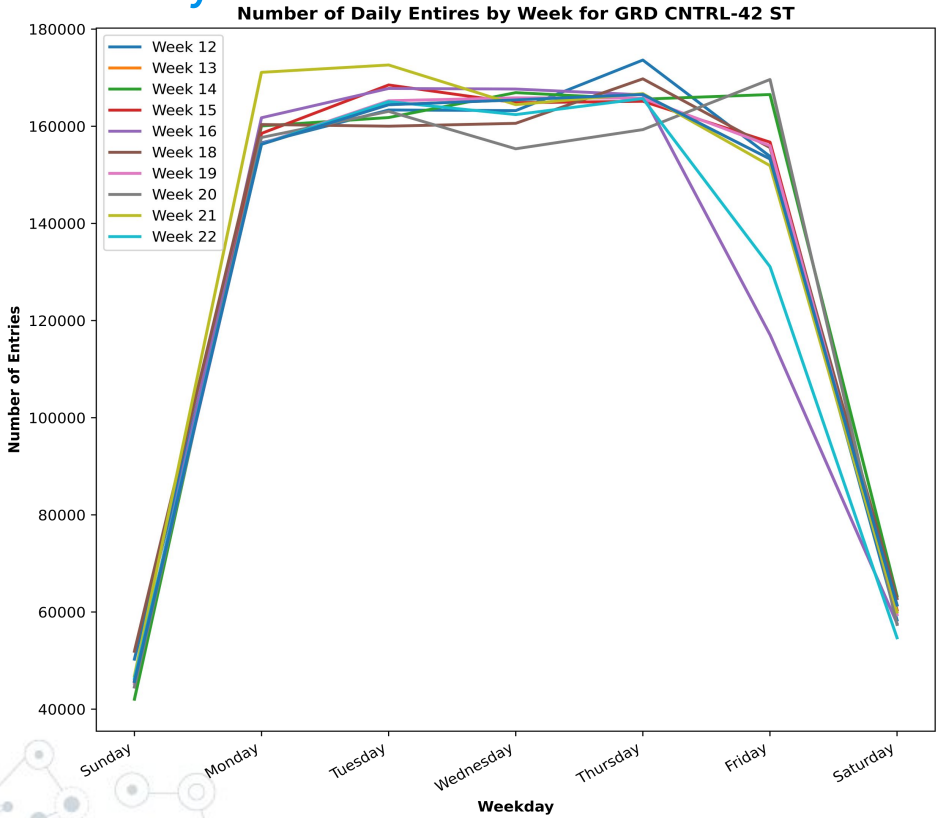
Appendix C:
Busiest Days of the Week



Key Takeaways

- Daily entries shown for all weeks for a top 10 station