NYC Subway Analysis for WomenTechWomenYes Gala

By: Braden Taack

Purpose

- "WomenTechWomenYes (WTWY) has an annual gala at the beginning of the summer each year. As we are new and inclusive organization, we try to do double duty with the gala both to fill our event space with individuals passionate about increasing the participation of women in technology, and to concurrently build awareness and reach.

  To this end we place street teams at entrances to subway stations. The street teams collect email addresses and those who sign up are sent free tickets to our gala."

Design

- Maximize the number of people WTWY can potentially talk to at the subway entrances

- Leverage the MTA data to find the busiest stations and times

- Leading WTWY to the busiest stations at the right times should be sure to get extra gala attendees
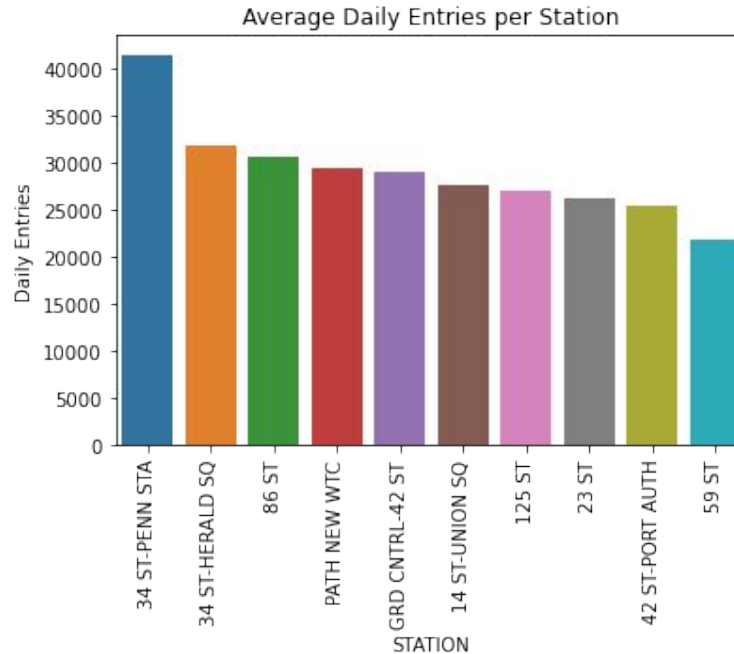
Data

- MTA Turnstile Data

- 03/27/2021 - 06/25/2021

- 2,720,549 Cumulative Turnstile Entry Records
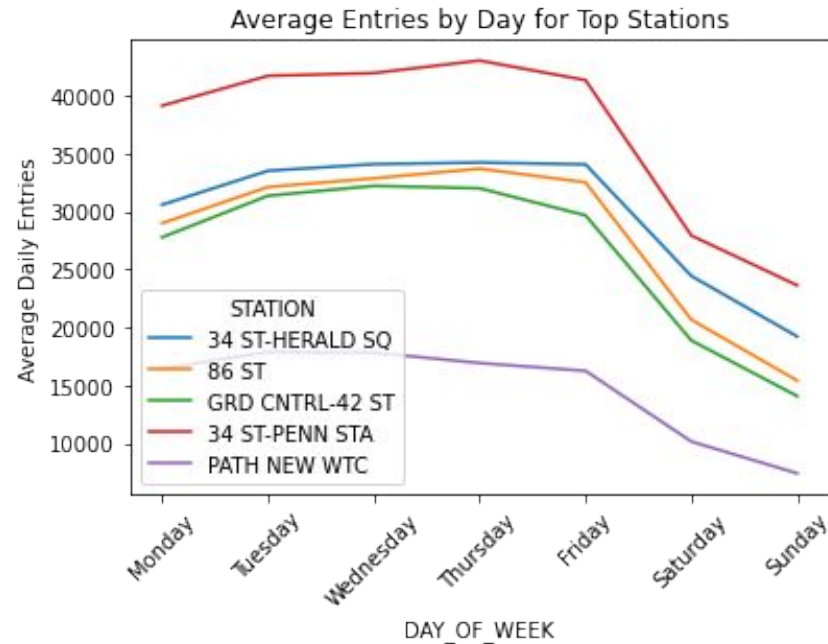
- Focused on Entries

Data Processing and Aggregation

- Processing
    - Created new DATE_TIME columns for chronological sorting
    - Removed 55 Duplicates for same turnstiles and dates
    - Cleaned outliers from Entries columns with max observations
- Aggregation Methods:
    - Daily Entries
        - Top 10 busiest stations
        - 3 month time series of daily entries for top 5 stations
        - Busiest days of the week for top 5 stations
    - 2-Hour Entries
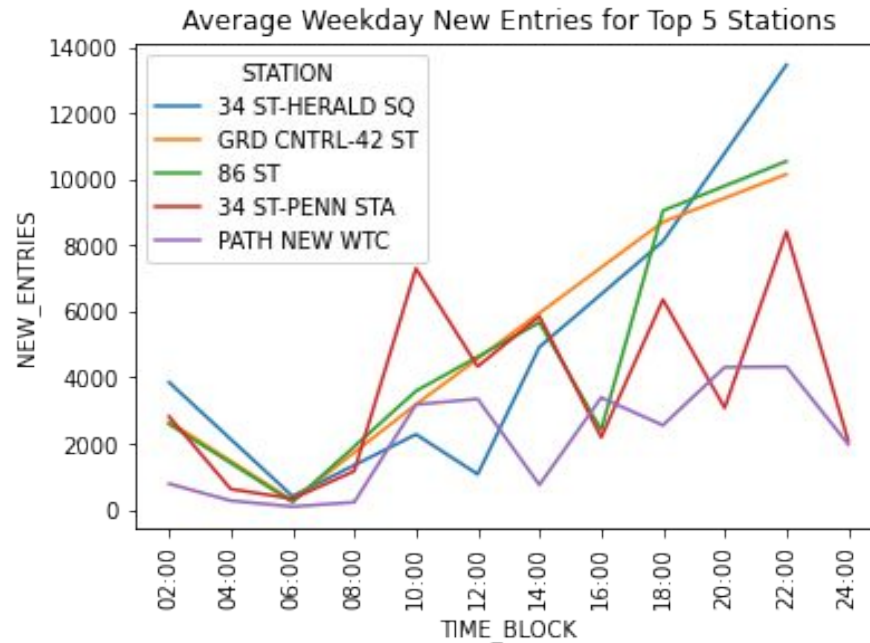   - Weekday average entries per time block for top 5 stations

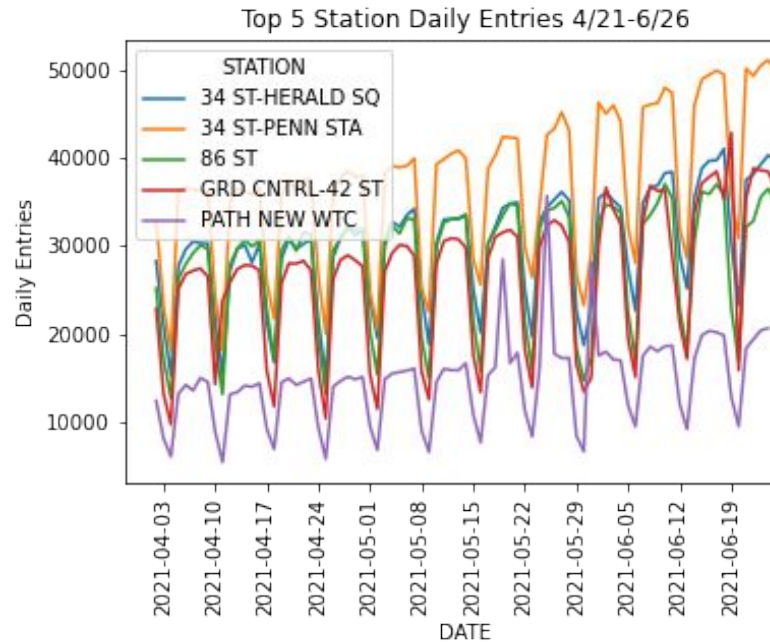# Results - 10 Busiest Subway Stations

Results - Average Daily Entries by Day of Week

Average Entries by Day for Top Stations

Results - Average Entries over 2 Hour Time Intervals

Average Weekday New Entries for Top 5 Stations

Results - Pre-summer Trends

Top 5 Station Daily Entries 4/21-6/26

Recommendations

- From my analysis, I recommend WTWY to canvas the 34 ST-Penn Station and 34 ST-Herald Square station on Tuesdays to Fridays between the hours of 05:00 P.M. and 08:00 P.M.

Thank you