WTWY MTA Canvassing Campaign Recommendations

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Goals

- Propose the best locations for WTWY to place canvassers within NYC subway stations to create awareness for upcoming summer gala through the use of data

Data Selection & Data Description

- Data sources:
  - MTA turnstile (from the MTA)
  - Weather data (from the National Association and Atmospheric Administration)
  - Location map (from googlemaps api)
- Key Variables:
  - Daily Entries: the sum of individuals who exited or entered a turnstile or station for a given day
    - Throughout we may display this for a single day or as a cumulative value for the year
  - Station: Represents a MTA subway station and can have multiple entrances and turnstiles
  - C/A: Represents an entry / exit for a station (booth)
- Decision to utilize the full year of 2020

Seasonality and Time-Related Trends

- Check if there any months that appear to be much better
- Determine if there are any stations that have more recently been outperforming (possibly due to a change in travel patterns from COVID)
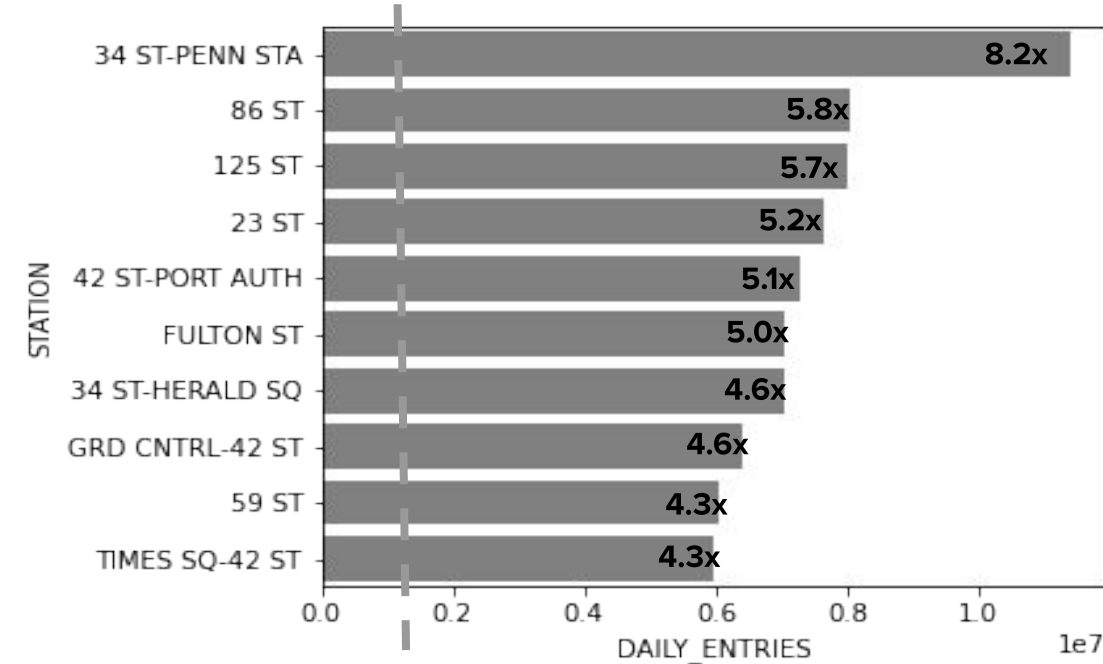
Daily Entries for the 2020 top 10 stations*
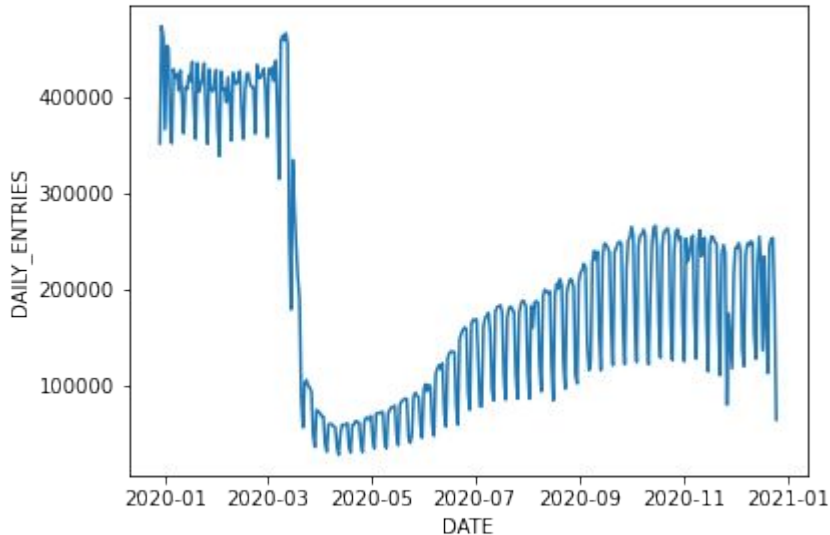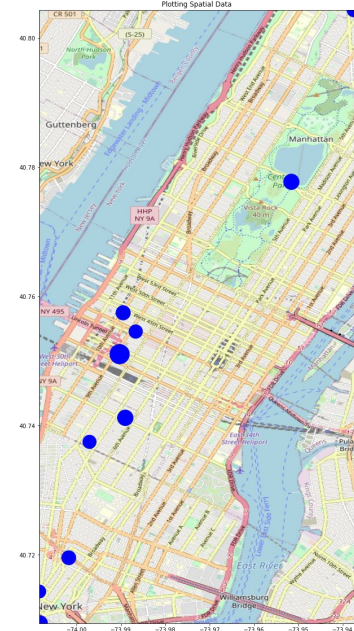

Daily Entries for the 2020 top 10 stations* by Station
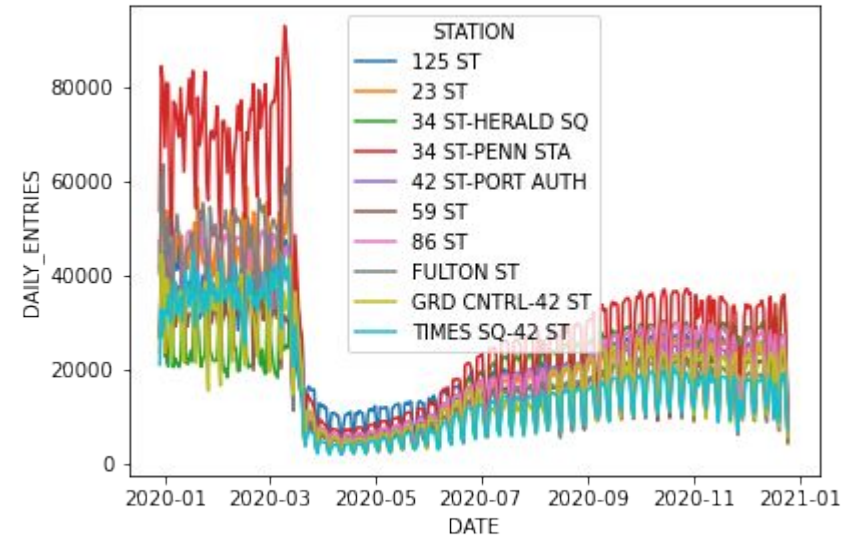
*Top stations based on total cumulative entries for 2020

Highest Volume Stations
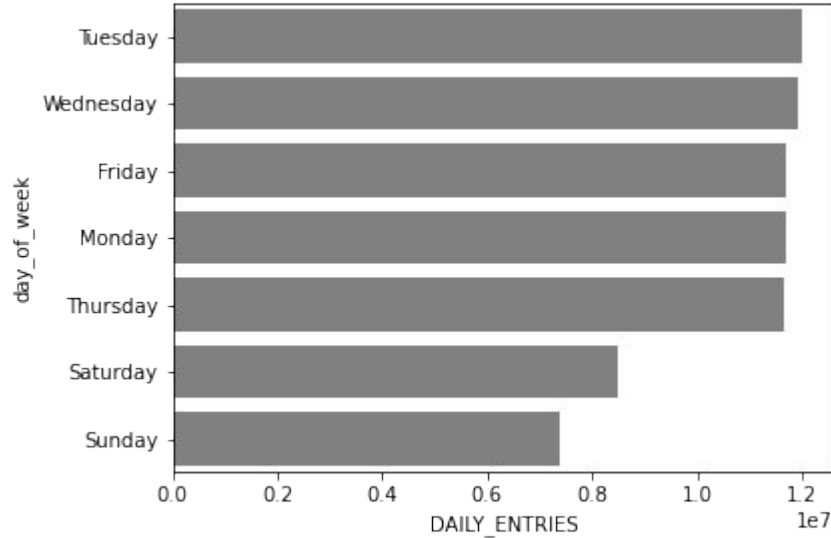

Top 10 Stations for Cumulative Daily Entries for 2020

Station	Multiple
34 ST-PENN STA	8.2x
86 ST	5.8x
125 ST	5.7x
23 ST	5.2x
42 ST-PORT AUTH	5.1x
FULTON ST	5.0x
34 ST-HERALD SQ	4.6x
GRD CNTRL-42 ST	4.6x
59 ST	4.3x
TIMES SQ-42 ST	4.3x

– – – Average annual entries for all stations

x Represents a multiple of average total entries for all stations

Traffic by Day of the Week

Cumulative Daily Entries for 2020 Top Stations by Day of Week

Weekdays far outpace weekends for total volume, differences between weekdays is negligible

Traffic by Control Area name and Station

**Cumulative Daily Entries for 2020 Top Control
Area Per Stations by Day of Week**
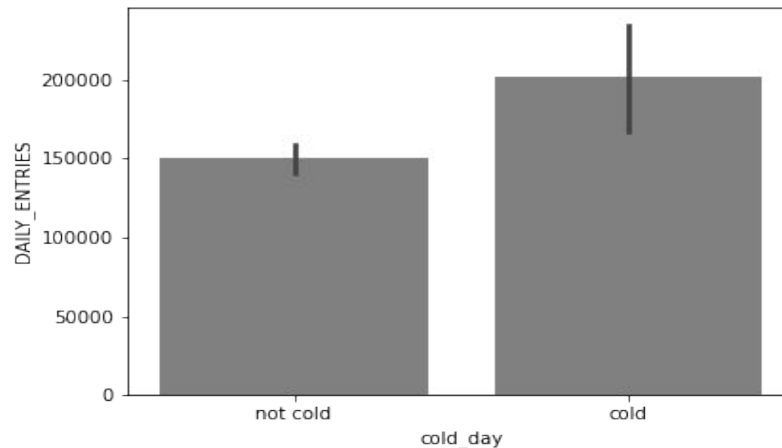
Impact of Weather: Variables

- We wanted to determine how "shocks" in weather may impact the total daily rides and created dummy variables to represent days with these "shocks"
  - Data was collected through an API from NOAA
  - Analysis only includes post pandemic data (3/15/20 onward)
- Variables created:
  - "Rainy Day" if total precipitation for the day was greater than ¼"
  - "Snowy Day" if total snowfall for the day was greater than 2.0"
  - "Hot Day" if the max temperature for the day was greater than 80.0 degrees F
  - "Cold Day" if the max temperature for the day was greater than 40.0 degrees F
- The following analysis only applies to the top 10 stations

Impact of Weather: Visuals

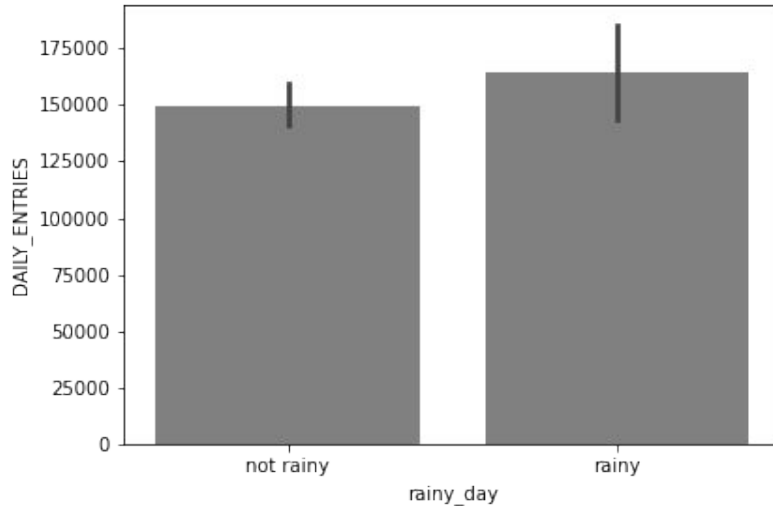**Daily Entries for the 2020 top 10 stations* grouped by "hot_day"**
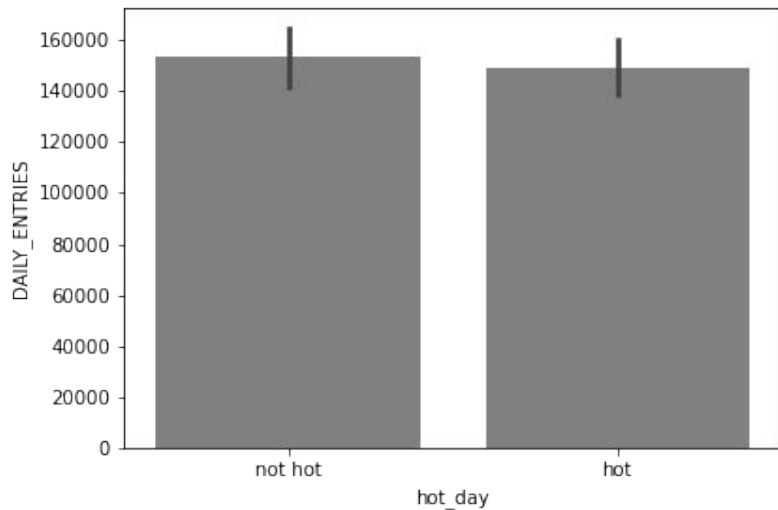
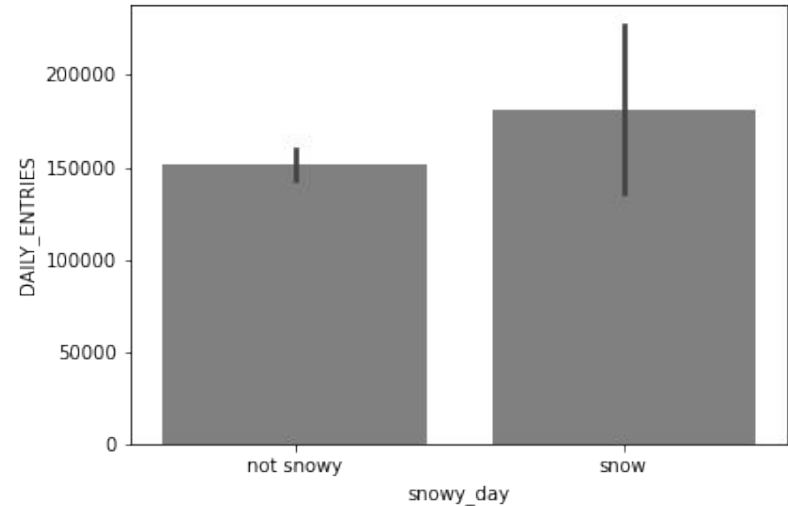**Daily Entries for the 2020 top 10 stations* grouped by "cold_day"**

- Colder days are the only weather "schock" that appear to increase traffic; all other weather "shocks" appear to have no effect

*Top stations based on total cumulative entries for 2020

Impact of Weather: Visuals

Daily Entries for the 2020 top 10 stations* grouped by "rainy_day"

Daily Entries for the 2020 top 10 stations* grouped by "snowy_day"

- Colder days are the only weather "schock" that appear to increase traffic; all other weather "shocks" appear to have no effect

*Top stations based on total cumulative entries for 2020

Final Conclusions

- Focus on top stations and their entry/exit points ("C/A")
- Weekdays are key
- Go later in the year if possible
- Don't worry about weather