



# WomenTechWomenYes (WTWY)

Exploratory Data Analysis on the NYC MTA Turnstile Data



# Problem Description

WomenTechWomenYes (WTWY) International holds annual gala at the beginning of summer.

“ Fill our event/gala space with individuals passionate about increasing the participation of women in technology, and to concurrently build awareness and reach.”

- WTWY International

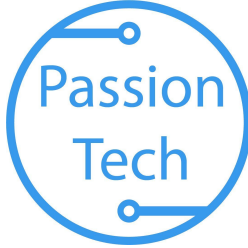


# Goal

Optimize the placement of WTWY street teams in NYC subway to promote the gala and future events



Maximum  
amount of  
sign-up



Passion in  
technology gala



Significant in  
fundraising efforts



- 472 subway stations
- Approximately 2 million of daily ridership

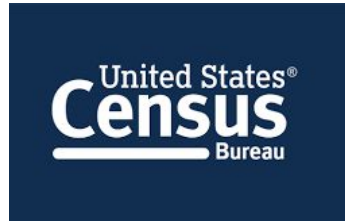
# Approaches

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- Which stations are the busiest stations
- When is the peak of the flow? (weekday / weekend )
- Where may have more people interested in summer technology gala
- Which area has more family above median income



NYC Subway Data



Median Income



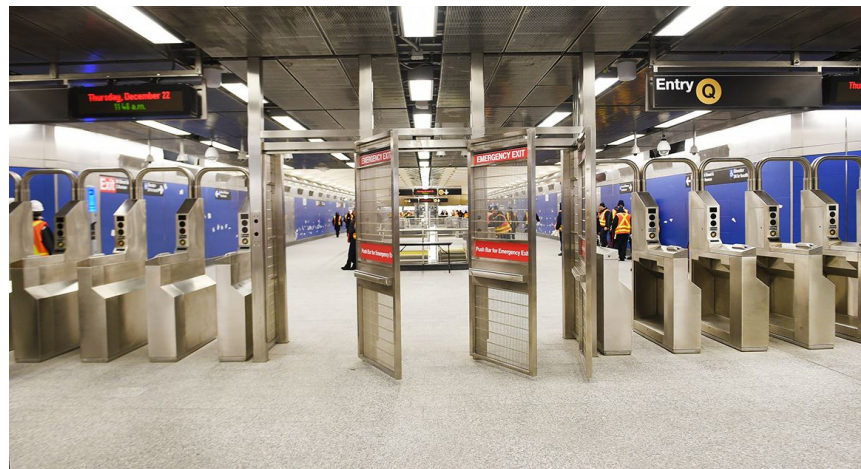
Career center

# Data

## MTA Turnstile Data

05/01/2021 - 08/31/2021

- 379 stations
- 5030 turnstiles
- 3,679,429 total records



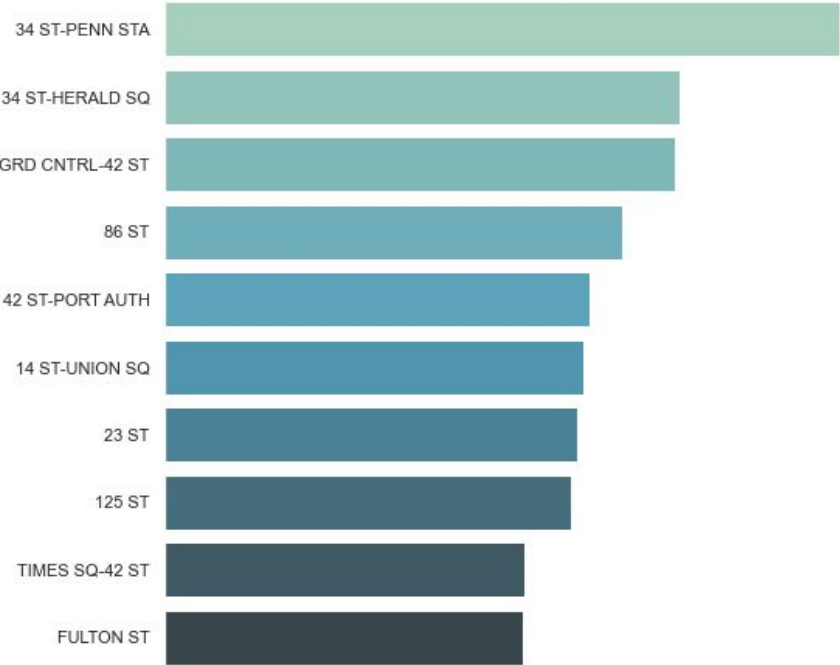
	CA	UNIT	SCP	STATION	LINENAME	DIVISION	DATE	TIME	DESC	ENTRIES	EXITS
0	A002	R051	02-00-00	59 ST	NQR456W	BMT	04/24/2021	00:00:00	REGULAR	7561288	2582898
1	A002	R051	02-00-00	59 ST	NQR456W	BMT	04/24/2021	04:00:00	REGULAR	7561295	2582903
2	A002	R051	02-00-00	59 ST	NQR456W	BMT	04/24/2021	08:00:00	REGULAR	7561302	2582918
3	A002	R051	02-00-00	59 ST	NQR456W	BMT	04/24/2021	12:00:00	REGULAR	7561336	2582977
4	A002	R051	02-00-00	59 ST	NQR456W	BMT	04/24/2021	16:00:00	REGULAR	7561426	2583008

# Insight

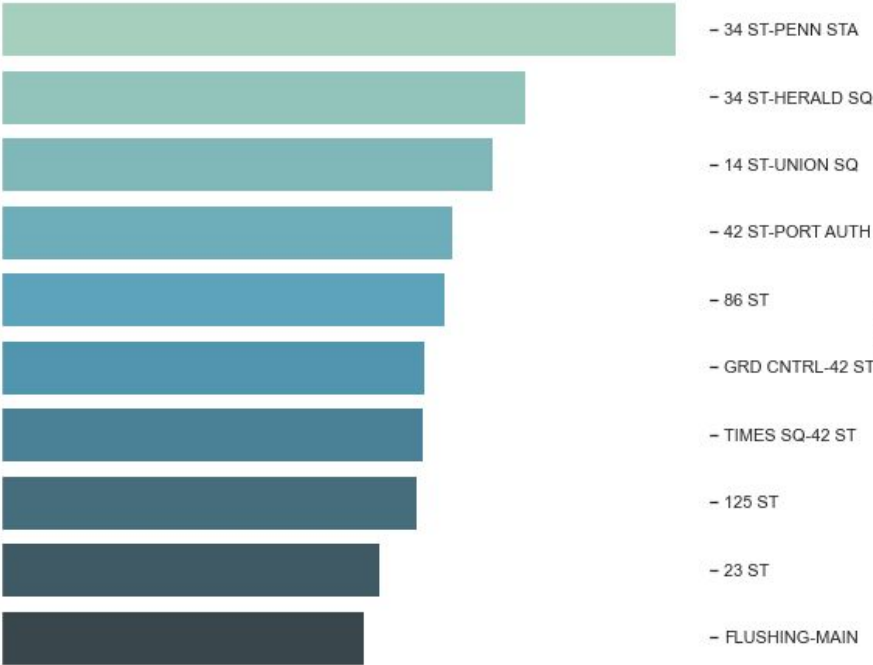


## The busiest New York City Stations

371,350,820 total riders per weekday

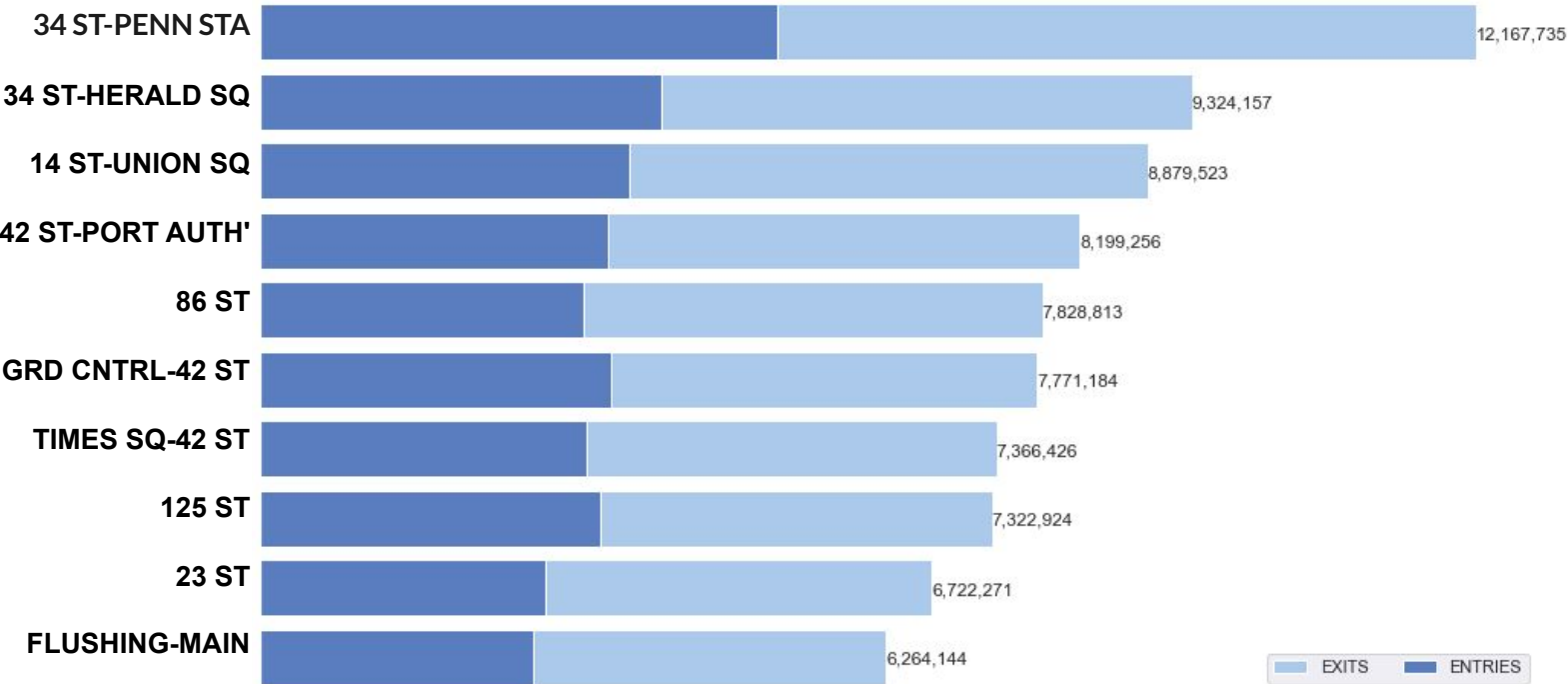


99,710,951 total riders per weekend



# Insight

## Top 10 busiest New York City Stations



Consider both Exits & Entries as total traffic to reduce bias

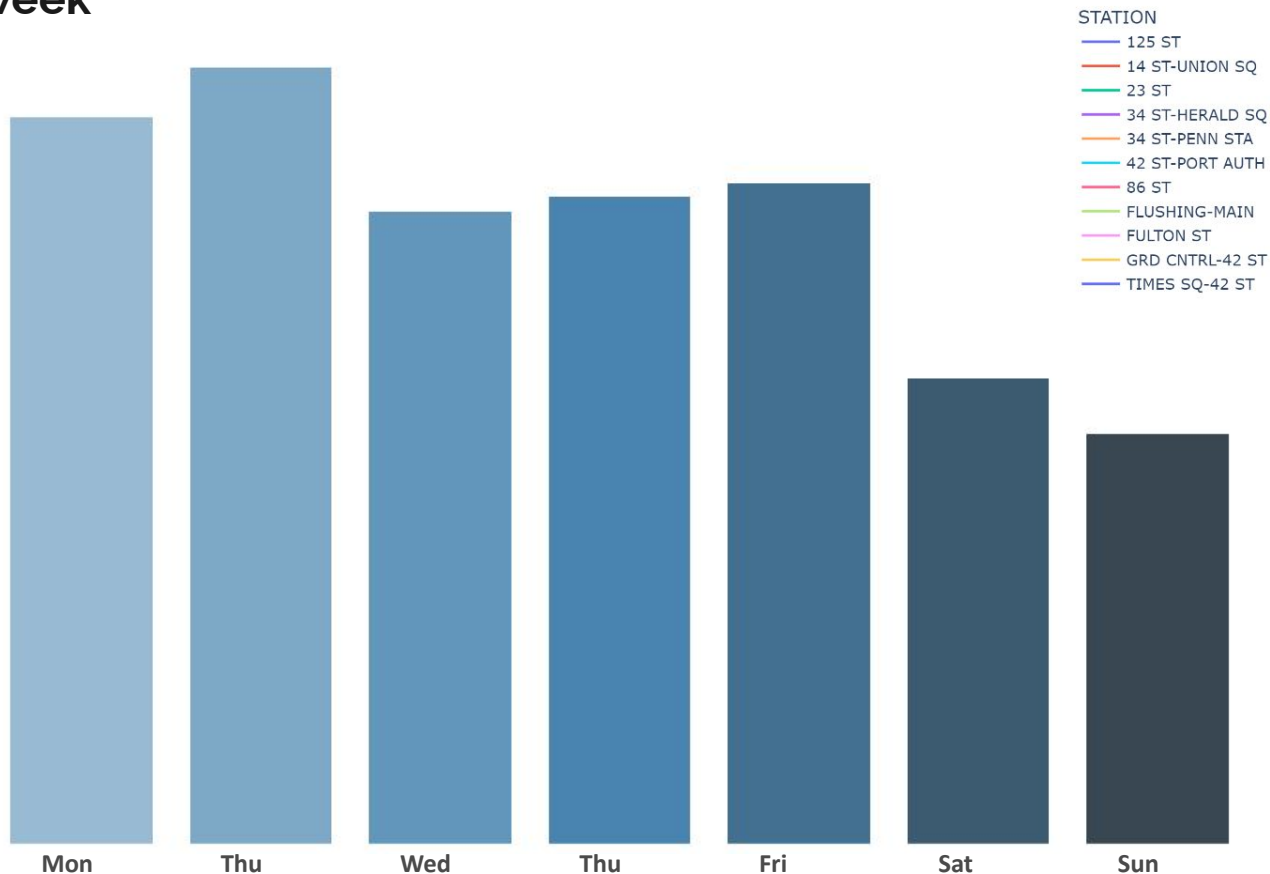


## Traffic in day of the week



Tuesday and Monday are  
two busiest day of the  
week

Sunday is the least busy  
day o the week





# Week traffic per top stations

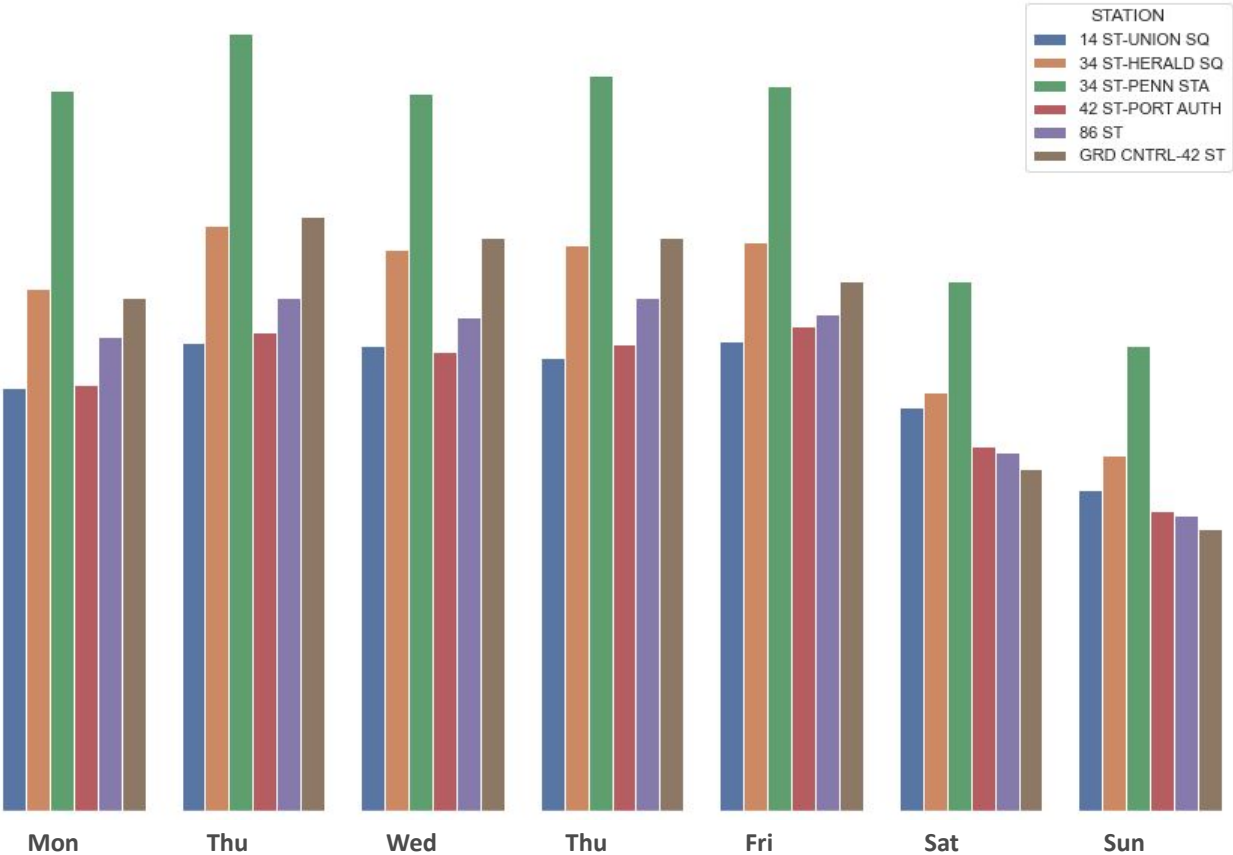


## Weekday - Tuesday & Monday

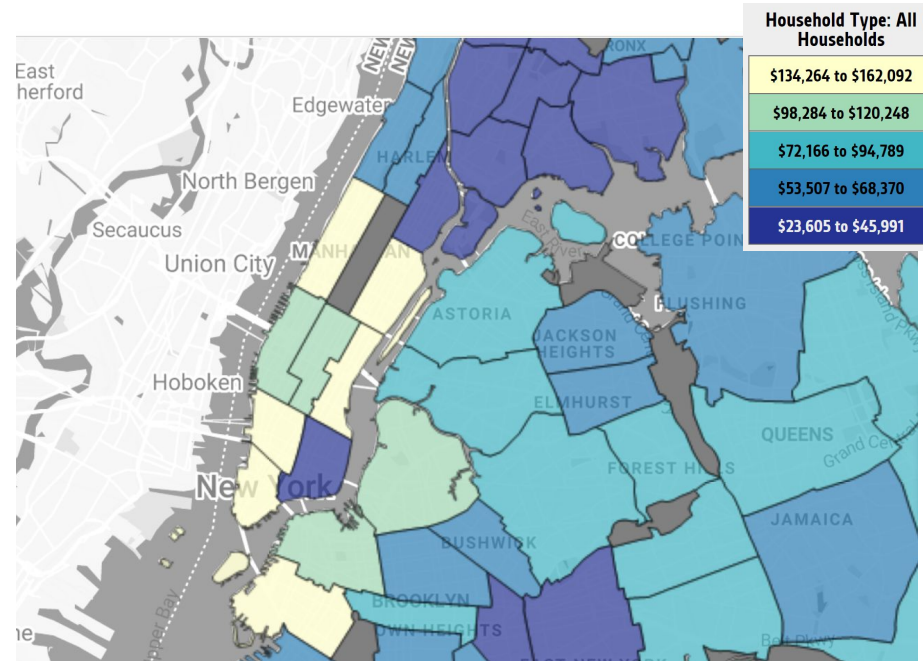
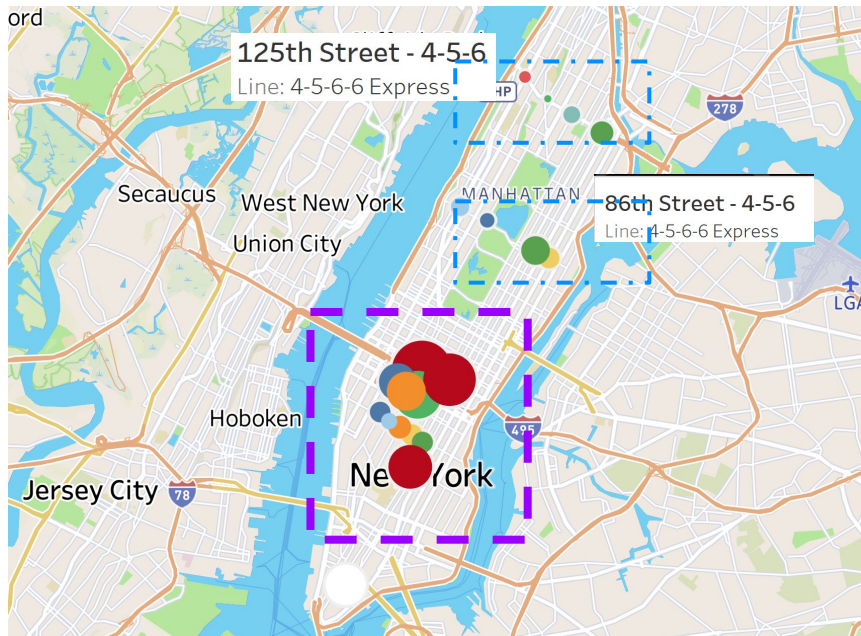
- 34 ST-PENN STA
- 34 ST-HERALD SQ
- GRD CNTRL-42 ST
- 86 ST

## Weekend - Saturday

- 34 ST-PENN STA
- 34 ST-HERALD SQ
- 14 ST-UNION SQ
- 42 ST-PORT AUTH



# Top Traffic stations v.s. Household Income



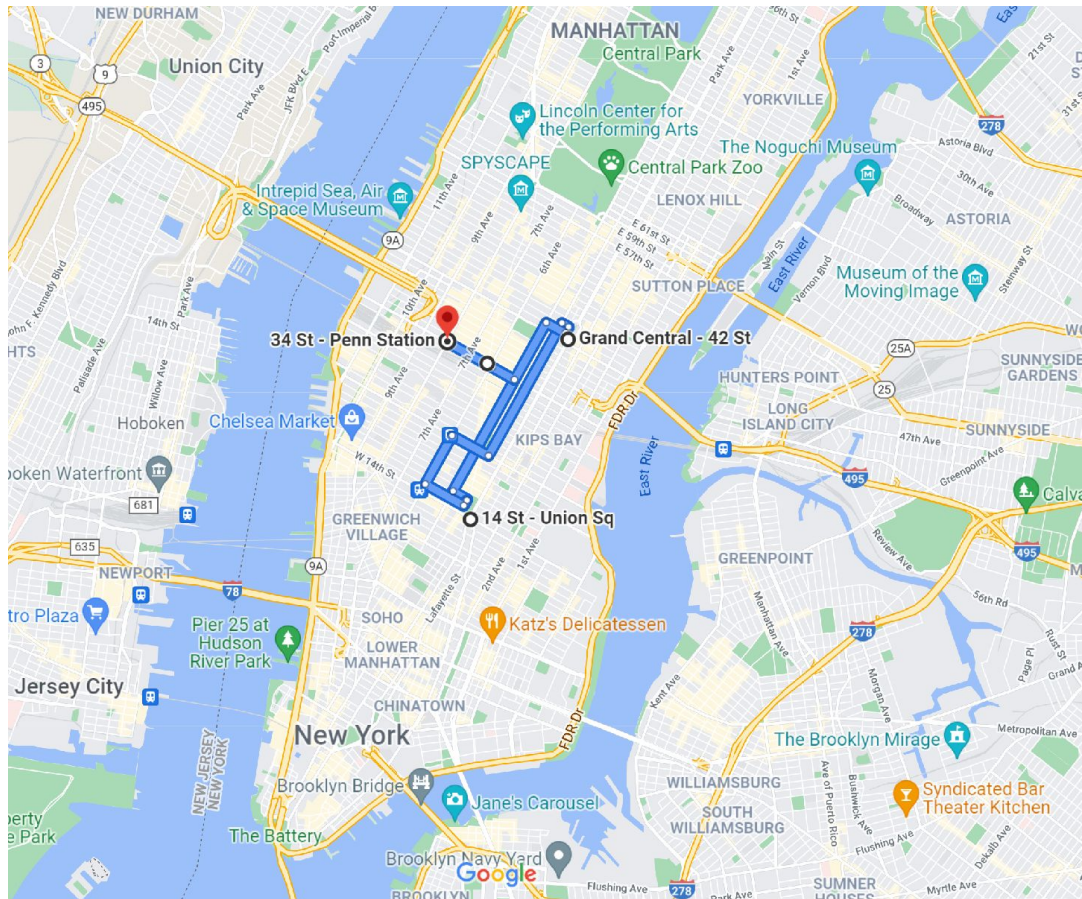
# Recommendations

## Weekday - Tuesday & Monday

- 34 ST-PENN STA
- 34 ST-HERALD SQ
- GRD CNTRL-42 ST

## Weekend - Saturday

- 34 ST-PENN STA
- 34 ST-HERALD SQ
- 14 ST-UNION SQ



# Follow up



Using the NYC OpenData find the public facilities - schools, career centers to get deeper insight





# Thank you



# Tools Used



- Python
- Numpy
- Pandas
- Matplotlib
- Seaborn
- Tableau
- Plotly.express

# NYC Top 10 busiest stations

## Traffic by Date (May to August)

