



Optimizing the effectiveness of WTWY street team



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Introduction

Our goal was to get the most engagement for the WTWY annual gala by determining optimal placement of street teams at entrances of subway stations.

By analyzing MTA subway and real estate data, we were able to determine which stations could help us:

- Collect the highest amount of signatures.
- Gather the most contributions for the cause.

Methodology

MTA subway data:

Cumulative entries and exits information for each turnstile in the system.

	C/A	UNIT	SCP	STATION	LINENAME	DIVISION	DATE	TIME	DESC	ENTRIES	EXITS
0	A002	R051	02-00-00	59 ST	NQR456W	BMT	05/22/2021	00:00:00	REGULAR	7575503	2588978
1	A002	R051	02-00-00	59 ST	NQR456W	BMT	05/22/2021	04:00:00	RECOVR AUD	7575515	2588982

Zillow data:

Variation in rental prices by zip code (December 2020 - July 2021).

	RegionID	RegionName	SizeRank	MsaName	2020-12	2021-01	2021-02	2021-03	2021-04	2021-05	2021-06	2021-07
0	61639	10025	1	New York, NY	2758.0	2794.0	2767.0	2832.0	2892.0	2975.0	3039.0	3124.0
2	61637	10023	3	New York, NY	2677.0	2705.0	2749.0	2779.0	2853.0	2902.0	2991.0	3085.0

Tools

- Data Ingestion / Processing:
 - SQLAlchemy
 - Python
 - Pandas
- Data Visualization:
 - Matplotlib
 - Seaborn

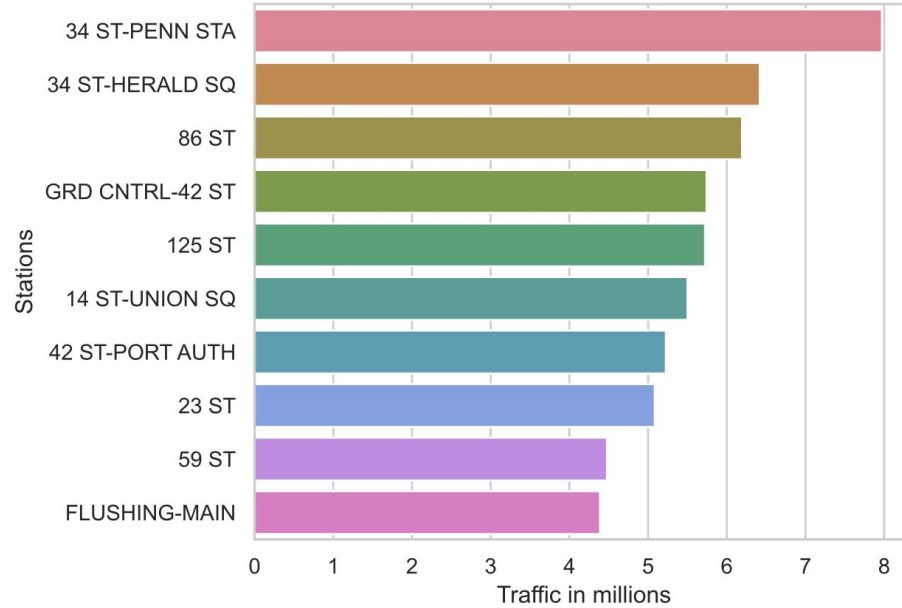
Key considerations

1. To get the most signatures, we will focus on finding the subway stations with higher traffic in the system.
2. To get the most contributions for the cause, we will target an affluent neighborhood.



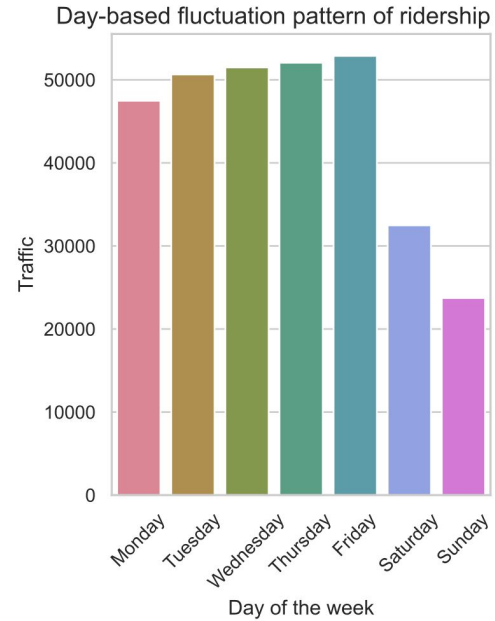
Results

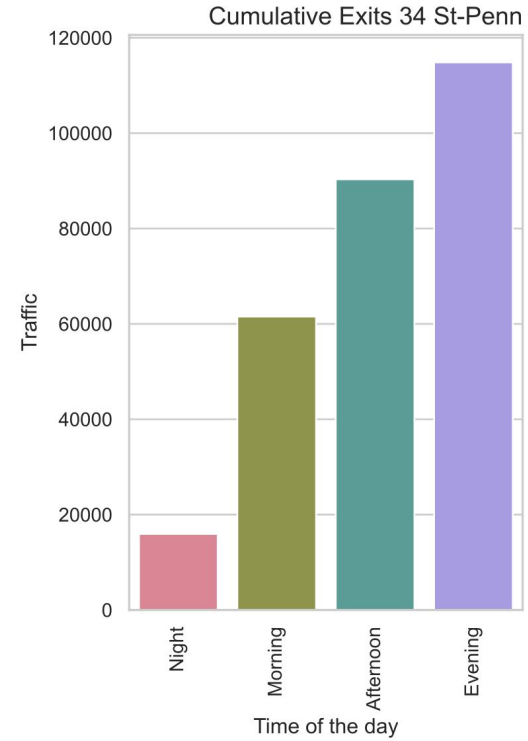
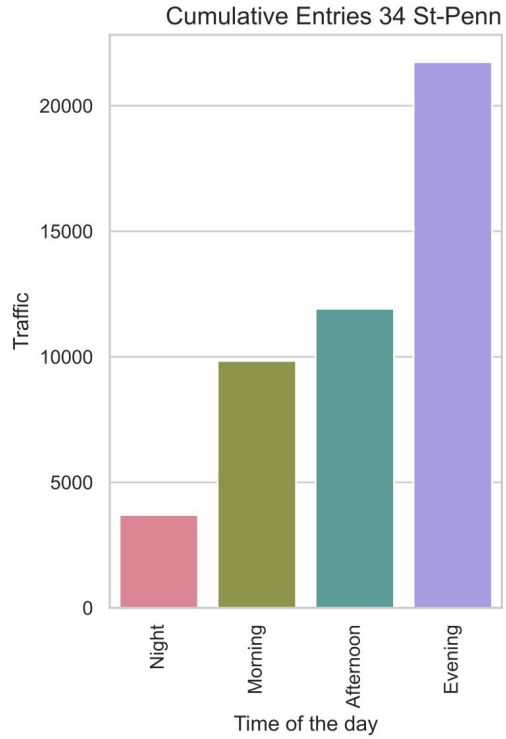
Top 10 busiest stations - February to June 2021



WHAT
NOW?

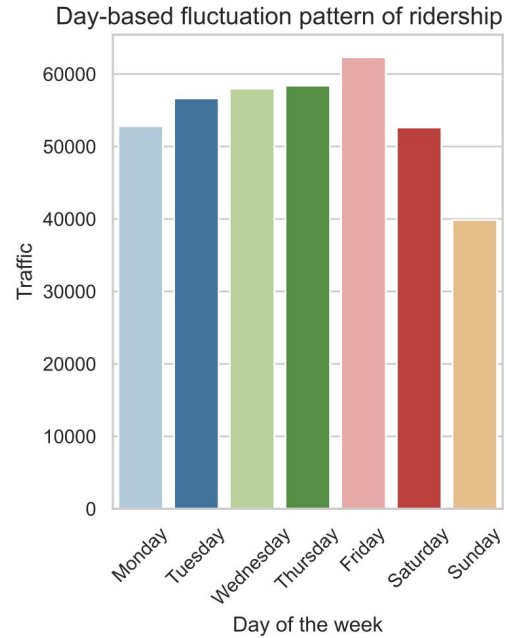
34 St-Penn Station

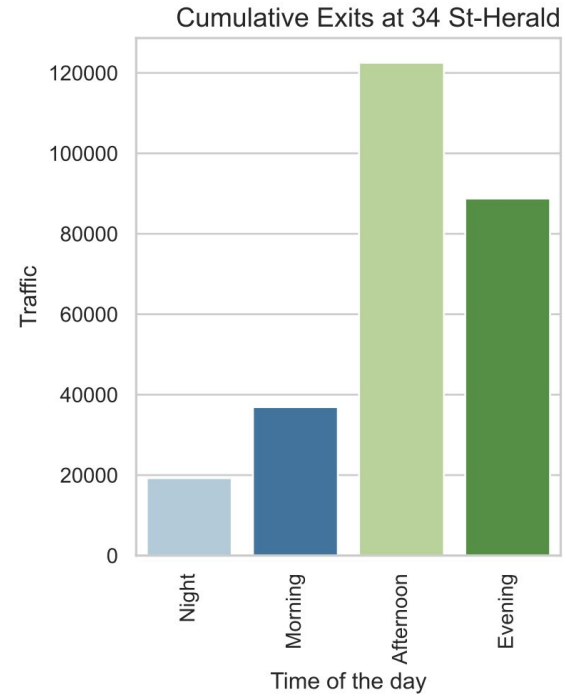
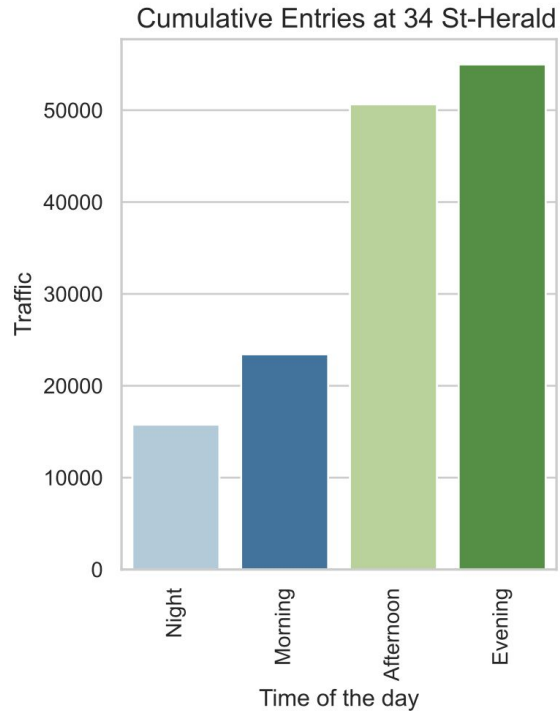




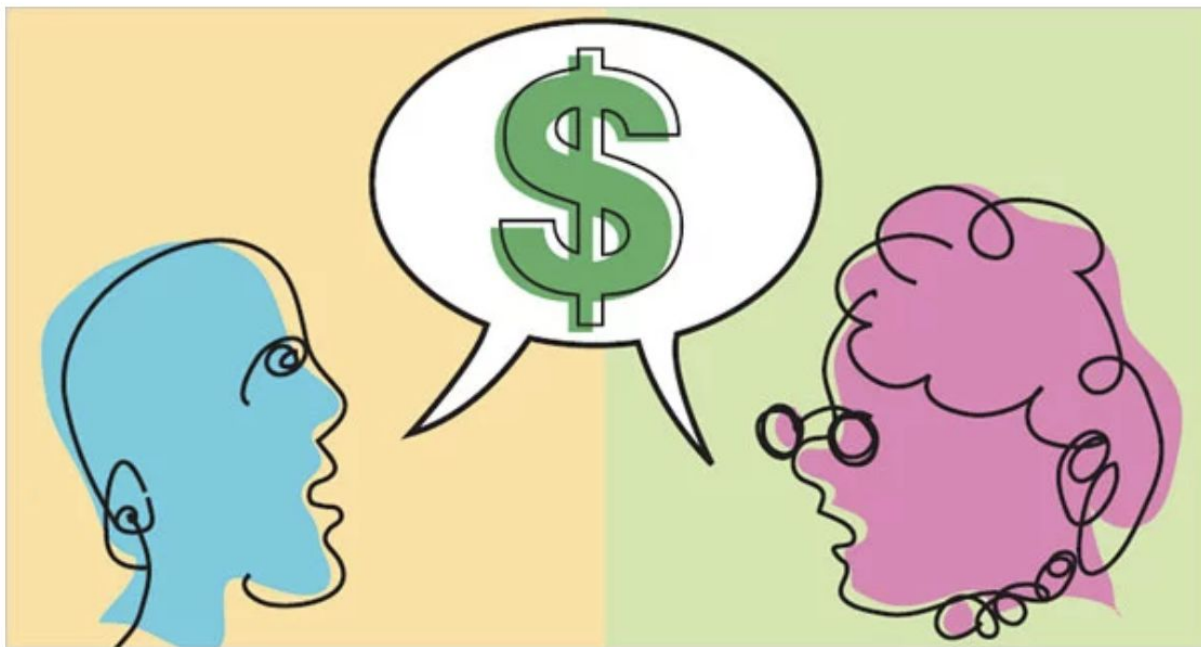
Penn-Station, southbound at 7 Av

34 St-Herald Square





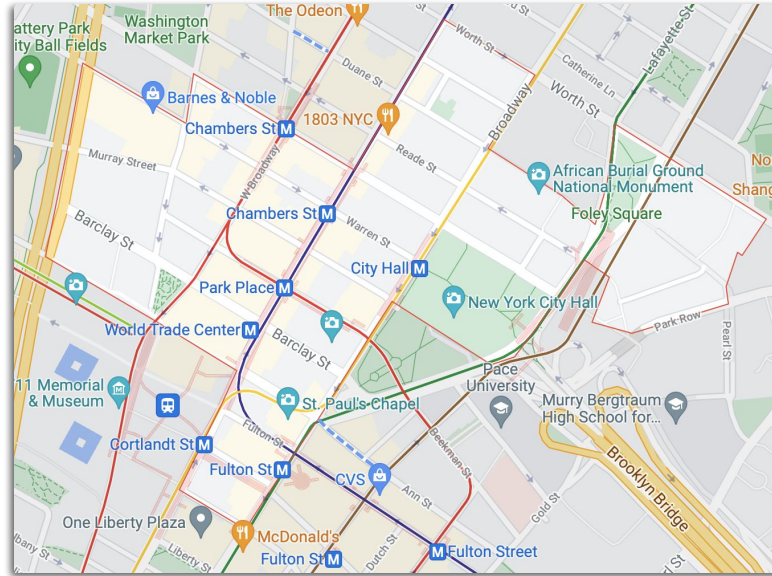
Herald Square-Station, northbound at Sixth Avenue



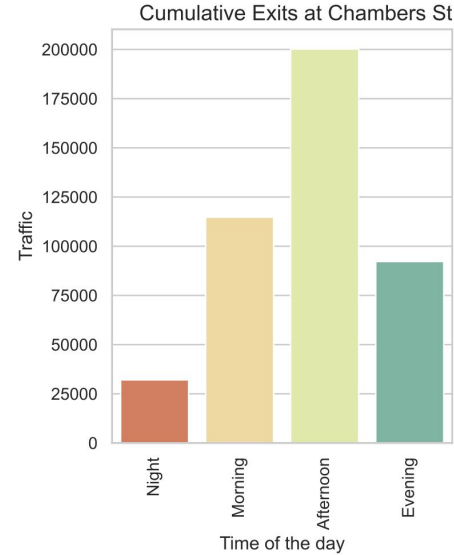
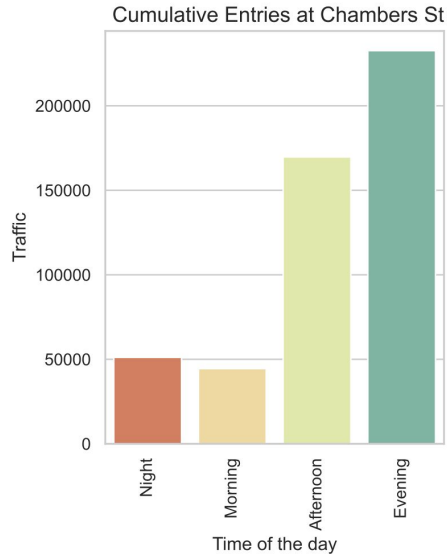
Top 5 of:



Zip code 10007 - Tribeca



Chambers Street Station Complex



Recommendations

- The street teams should be in place in the evenings of the weekdays in the higher traffic entries of the busiest stations.
- For the high income neighborhood approach, the placement of the street team should be in the mornings or evenings.

Future Work

- Further analyze data in order to find stations, where the number of entries in the morning is similar to the number of exits in the evening, with the intention of targeting residents and not tourists.
- Use previous gala data to create target areas based on the collected attendees addresses.