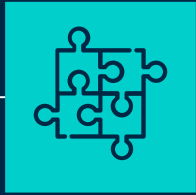




# Using Data Analytics to Inform and Improve WTWY Fundraising and Outreach

Matt Ryan

# THE PROBLEM



01

## MOTIVATION

WTWY is looking to expand their reach, raise awareness, and attract a large gala turnout



02

## OBJECTIVES

Use the data available to us to provide unique insights into our problem



03

## GOALS

Provide actionable recommendations based on our newfound understandings

# METHODOLOGY

1. Start with our dataset:
  - NYC subway turnstile data from Jan 2021 to Aug 2021
2. Tools:
  - SQLAlchemy to bring the data in
  - Pandas and numpy to sanitize and manipulate our data
  - Matplotlib to visualize our data
  - SQLite for higher level data exploration

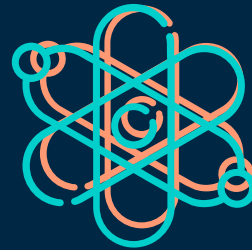


# METHODOLOGY

## RAW DATA

	CA	UNIT	SCP	STATION	LINENAME	DIVISION	DATE	TIME	DESC	ENTRIES	EXITS	STATION_LINE
0	A002	R051	02-00-00	59 ST	NQR456W	BMT	2020-12-26	03:00:00	REGULAR	7508509	2557569	59 ST, NQR456W
1	A002	R051	02-00-00	59 ST	NQR456W	BMT	2020-12-26	07:00:00	REGULAR	7508511	2557581	59 ST, NQR456W
2	A002	R051	02-00-00	59 ST	NQR456W	BMT	2020-12-26	11:00:00	REGULAR	7508531	2557636	59 ST, NQR456W
3	A002	R051	02-00-00	59 ST	NQR456W	BMT	2020-12-26	15:00:00	REGULAR	7508610	2557667	59 ST, NQR456W
4	A002	R051	02-00-00	59 ST	NQR456W	BMT	2020-12-26	19:00:00	REGULAR	7508767	2557689	59 ST, NQR456W
5	A002	R051	02-00-00	59 ST	NQR456W	BMT	2020-12-26	23:00:00	REGULAR	7508852	2557704	59 ST, NQR456W
6	A002	R051	02-00-00	59 ST	NQR456W	BMT	2020-12-27	03:00:00	REGULAR	7508858	2557705	59 ST, NQR456W
7	A002	R051	02-00-00	59 ST	NQR456W	BMT	2020-12-27	07:00:00	REGULAR	7508862	2557711	59 ST, NQR456W
8	A002	R051	02-00-00	59 ST	NQR456W	BMT	2020-12-27	11:00:00	REGULAR	7508885	2557743	59 ST, NQR456W
9	A002	R051	02-00-00	59 ST	NQR456W	BMT	2020-12-27	15:00:00	REGULAR	7508955	2557778	59 ST, NQR456W

## DATA MAGIC

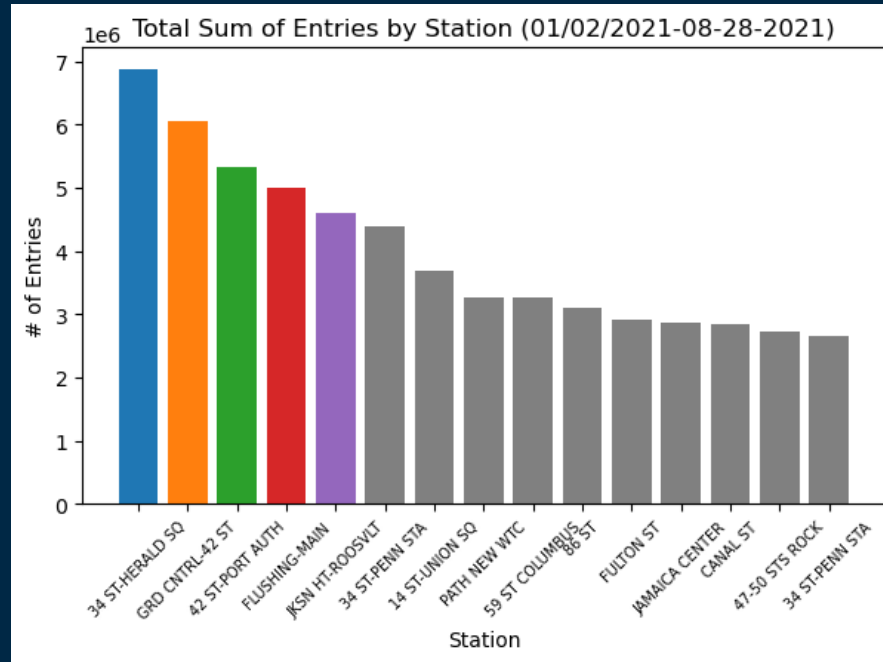


(EDA CLEANING AND  
MANIPULATION)

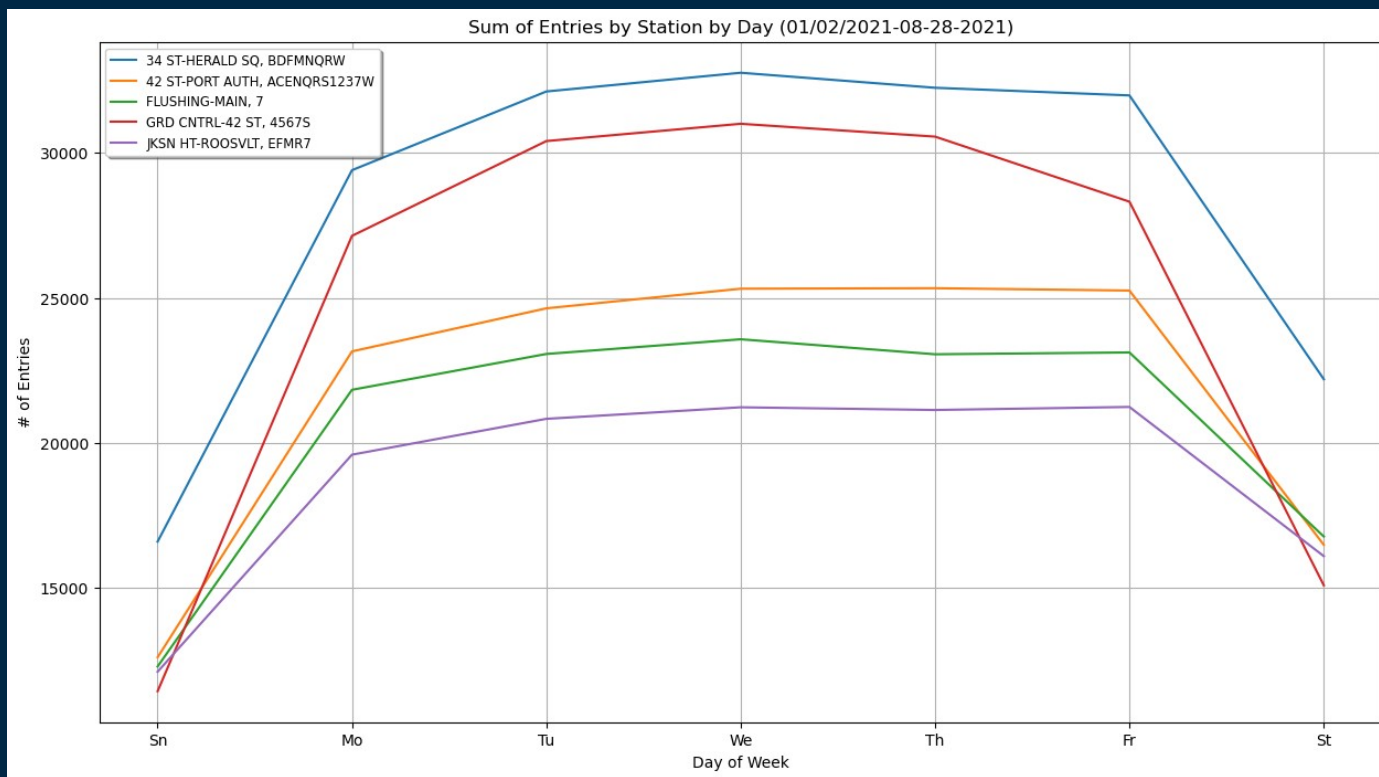
## NEW DATA

	CA	UNIT	SCP	STATION_LINE	DATE	ENTRIES	DAILY_TOT	DAILY_TOT_ABS
1	A002	R051	02-00-00	59 ST, NQR456W	2020-12-27	7508858	349.0	349.0
2	A002	R051	02-00-00	59 ST, NQR456W	2020-12-28	7509173	315.0	315.0
3	A002	R051	02-00-00	59 ST, NQR456W	2020-12-29	7509828	655.0	655.0
4	A002	R051	02-00-00	59 ST, NQR456W	2020-12-30	7510464	636.0	636.0
5	A002	R051	02-00-00	59 ST, NQR456W	2020-12-31	7511071	607.0	607.0
6	A002	R051	02-00-00	59 ST, NQR456W	2021-01-01	7511448	377.0	377.0

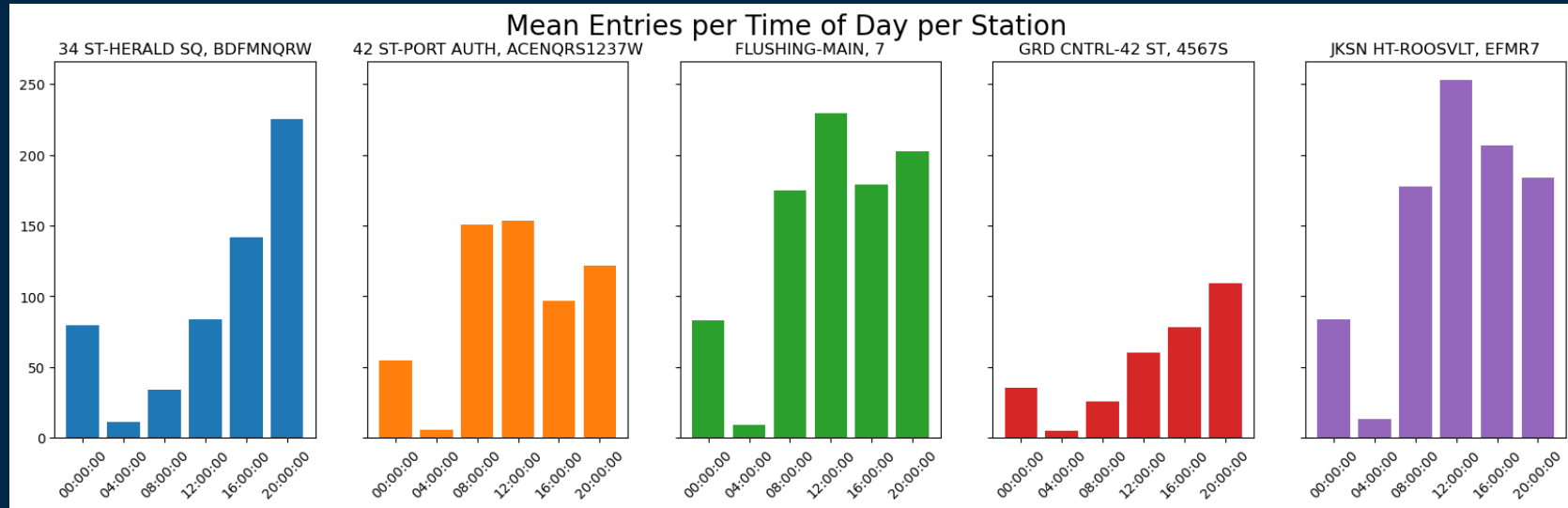
# RESULTS



# RESULTS



# RESULTS



# CONCLUSIONS

- Target the 5 high volume stations with street teams
- The middle/end of the work week is consistently high volume across all 5 stations
- Focus night teams on 34 St – Herald; Flushing – Main and Jksn Ht – Roosevelt see big influxes around noon



# FUTURE WORK

1. Further sanitization of data
2. Deeper investigation into trends or relation to events
3. Potential to tie in US Census Data
  - Look to areas with higher women/men ratios
  - Using median income by zipcode to target deeper pockets or people who might need a leg up

The background is a dark blue field decorated with various geometric elements. It includes numerous small squares in teal, orange, and pink, some of which are solid while others are hollow. Thin white vertical lines of varying lengths are scattered across the composition, creating a modern, minimalist aesthetic.

THANK  
YOU

# APPENDIX

## RESOURCES

- [Github Repo](#)
- [MTA Data](#)