WomenTechWomenYes (WTWY)

Utilizing NYC's MTA Data for Optimizing Placement of Street Teams

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Motivation

Get attendees to the annual gala

Optimize street team work

End Goal:

Increase the participation of women in tech

Build awareness and reach

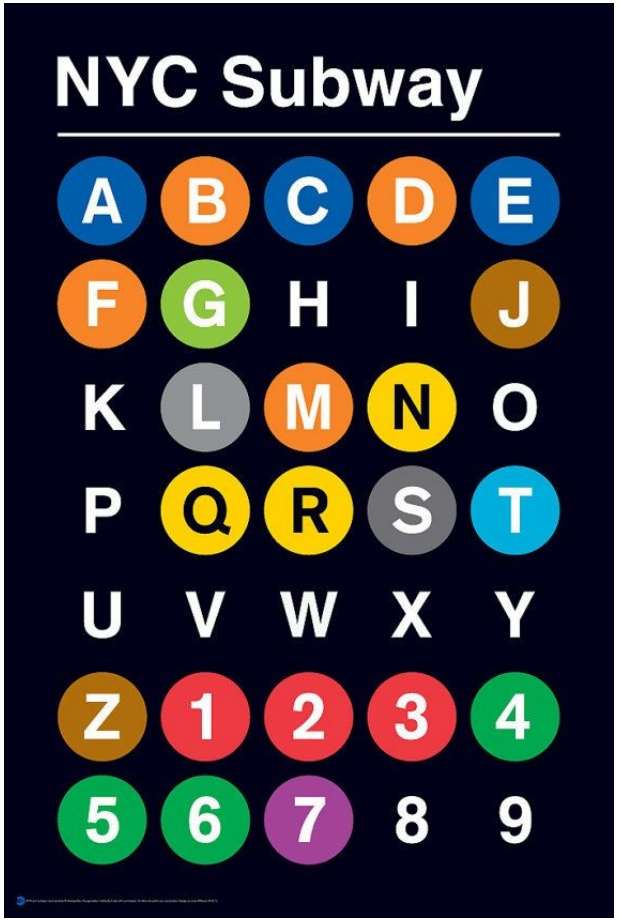
Introduction

Means:

Analyze NYC MTA data

Determine the busiest stations across the city

Track daily patterns



Methodology Part 1

Data Used:

MTA turnstile data

Methodology:

Exploratory Data Analysis (EDA)

Skills:

Python and Pandas
Visualizations via Matplotlib

Methodology Part 2

Download and clean MTA data from March, April, May of 2018 & 2019

Group and sort data by certain columns, like entries and date/time

Aggregate MTA data by station to calculate the busiest stations per day

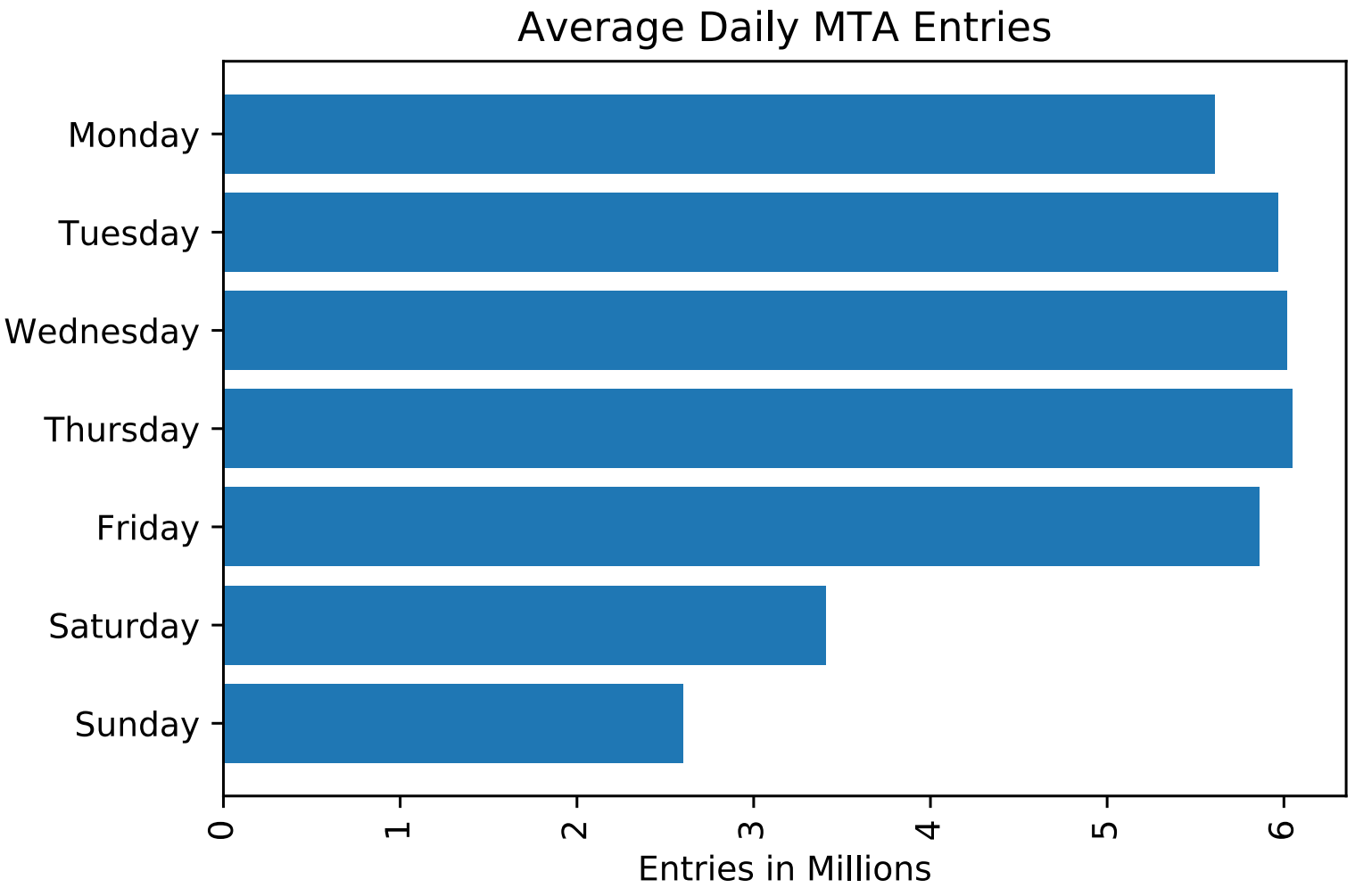
Results

More Riders on Weekdays

Weekdays similar, Mondays slightly less

Weekends significantly lower

DAY	INS	OUTS
M	5.6	4.3
T	6.0	4.6
W	6.0	4.6
R	6.0	4.6
F	5.9	4.5
S	3.4	2.8
S	2.6	2.1


Average Daily MTA Entries
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
0
1
2
3
4
5
6
Entries in Millions

Busiest Stations on Weekdays

Observations:

All located in Manhattan

Majority located in Midtown – close to popular sites

Sprinkle in Flatiron & Financial Districts, Tribeca, Harlem & UWS

STATION	INS	OUTS
34 ST-PENN STA	171,641.8	149,048.0
GRD CNTRL-42 ST	156,236.2	137,458.3
23 ST	120,611.1	86,982.0
34 ST-HERALD SQ	116,479.1	108,184.5
14 ST-UNION SQ	105,772.2	93,012.0
FULTON ST	101,452.4	85,097.8
TIMES SQ-42 ST	99,689.2	92,261.2
42 ST-PORT AUTH	90,768.4	73,997.2
86 ST	84,331.3	72,739.9
125 ST	76,559.1	60,876.4
59 ST COLUMBUS	76,224.3	61,198.0
CANAL ST	71,865.2	56,979.1
96 ST	65,934.5	49,772.2
CHAMBERS ST	65,757.5	47,477.9
59 ST	65,305.6	54,559.8

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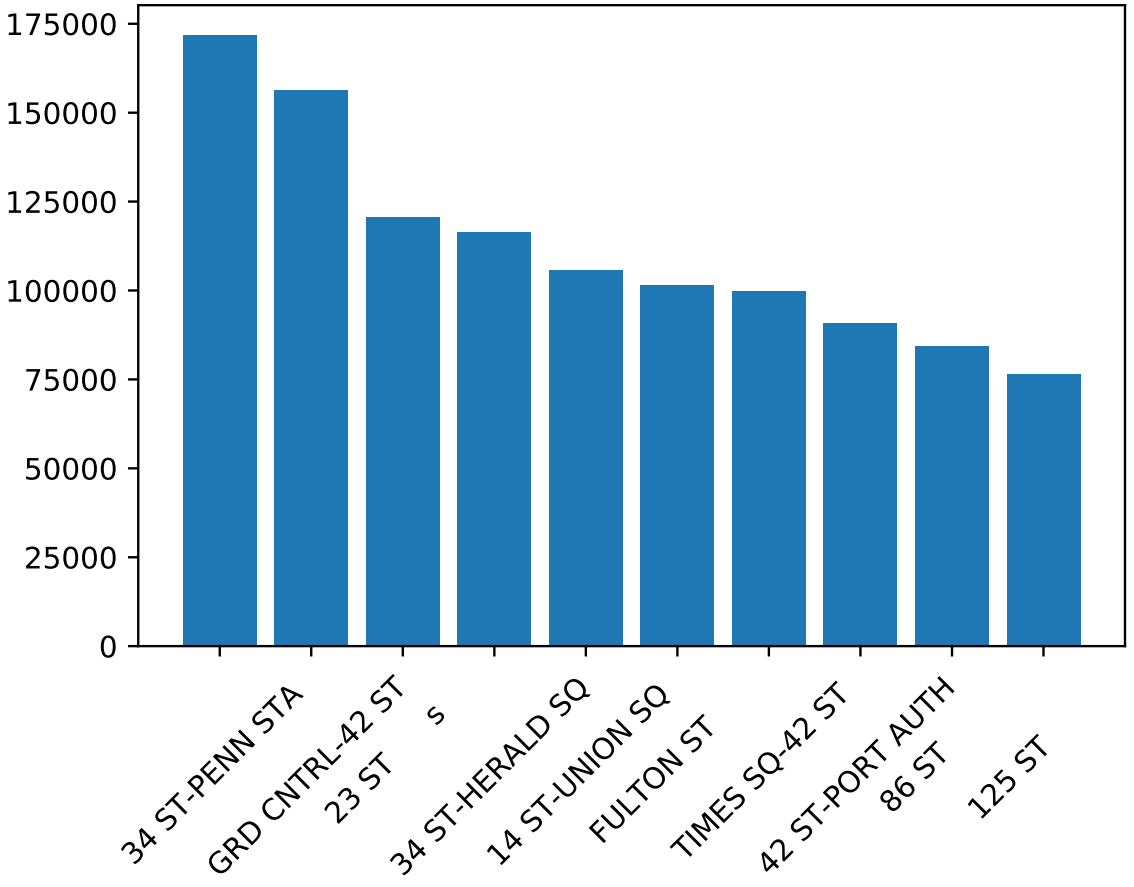
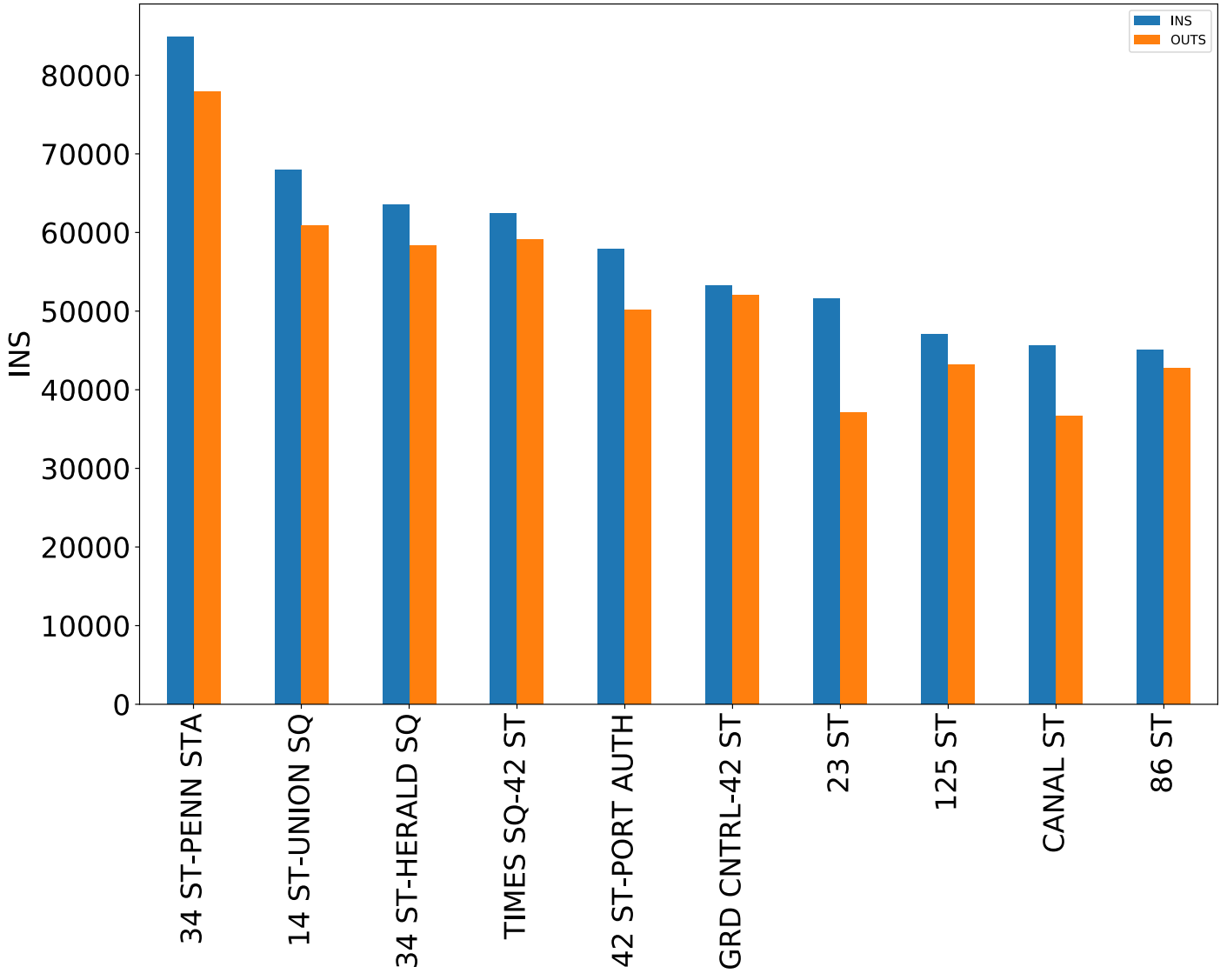


MTA MEAN ACROSS WEEKENDS

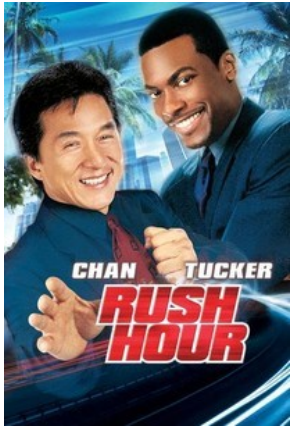


Conclusions

Our Recommendations:

Place street teams at 10 busiest stations on Tuesday – Friday

What times?
Best Guess:
Rush Hour



STATION	Percentage	Placement 20 Street Team Members
34 ST-PENN STA	12%	3
GRD CNTRL-42 ST	11%	3
23 ST	8%	2
34 ST-HERALD SQ	8%	2
14 ST-UNION SQ	7%	2
FULTON ST	7%	2
TIMES SQ-42 ST	7%	2
42 ST-PORT AUTH	6	1
86 ST	6	1
125 ST	5	1
59 ST COLUMBUS	5	1

Thank You WTWY!

We hope your next stop is with

cular!

Appendix

References:

1. (2020, January 4). Turnstile Data. Retrieved from http://web.mta.info/developers/turnstile.html

Next Steps to Continue Helping WTWY

Analyze Additional Data:

- NYC Census Data:
  - Higher income residents
  - Higher concentrations of women (ideally ages 25 – 40)

- NYC business data for higher concentrations of tech companies

Marketing beyond subway station outreach:

- Social media advertising and email marketing