



Project Benson

Team 4: Anna, Lauren, Nicky, Wendy

September 23, 2016

Goal

- Build WTWY awareness and reach
- Fill WTWY gala with attendees
- **Action: collect email addresses**

Objective targets

- High volume subway stations
- At peak times and days of the week
- Near universities and parks



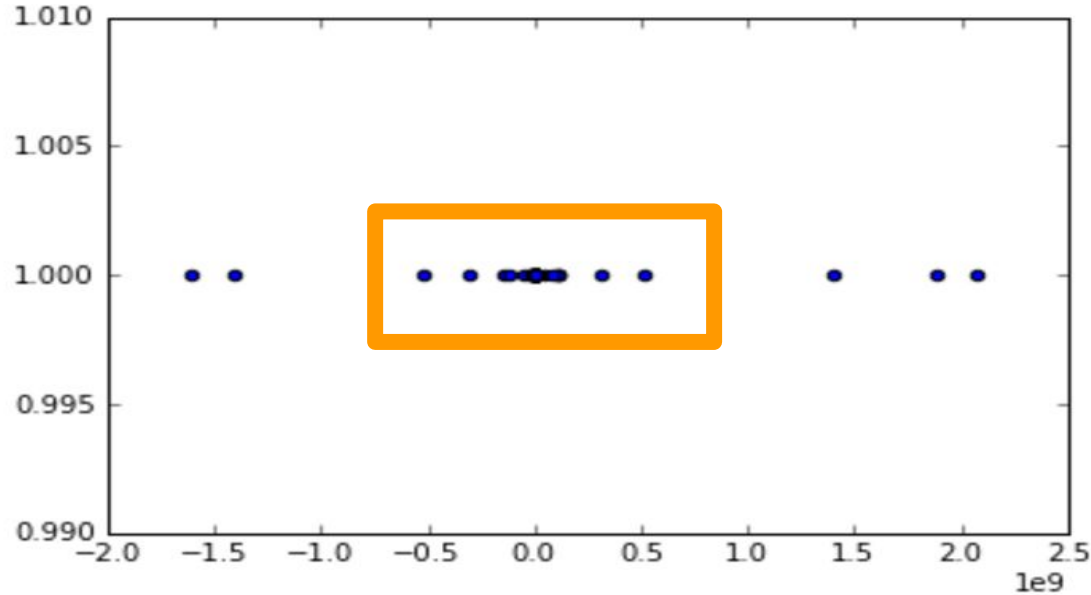
Methods: Data & Tools

- Use MTA Turnstile Data Set
 - Entries only
 - **Dates:** Aug 27-Sept 16, 2016
i.e. “back to school”
- Where is someone most likely to stop?
- Consider proximity to other stations, parks, etc. for additional foot traffic
- Tools used: Python (pandas, numpy, matplotlib modules)



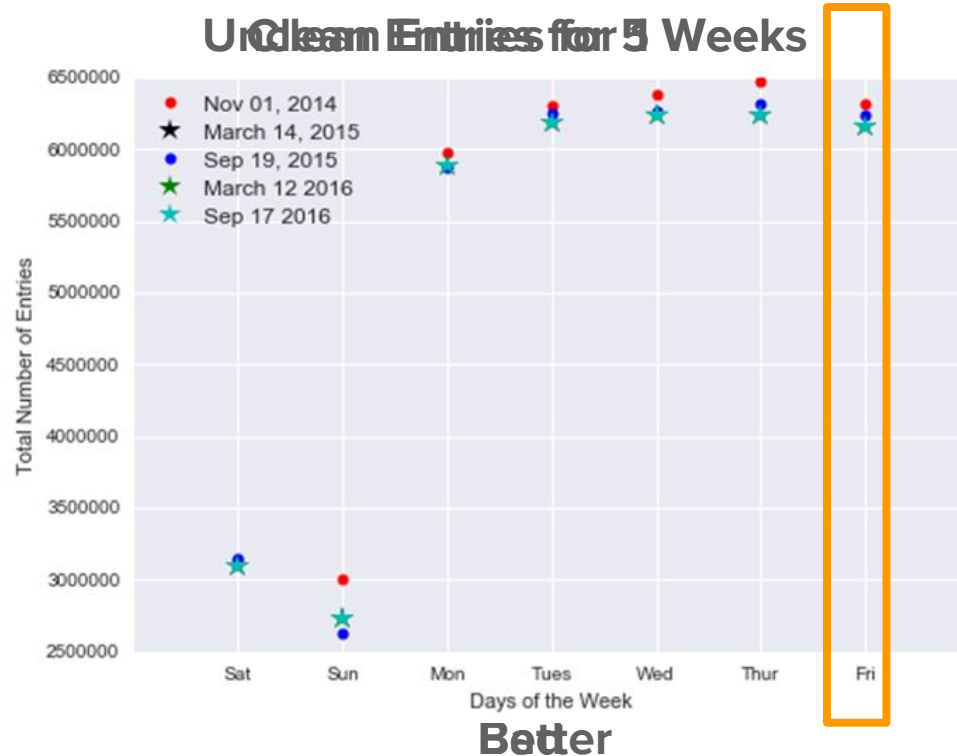
Exploring the Raw Data

Graphing All Entries Shows Many Outliers



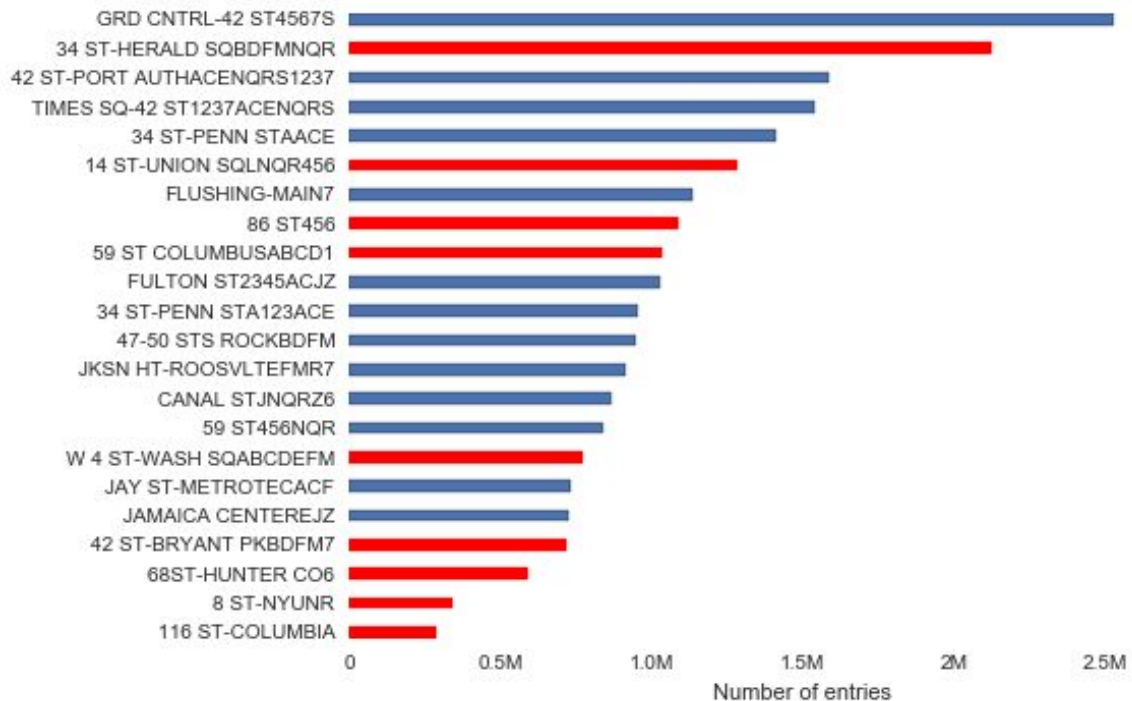
Entries by Row Difference

Exploring the Raw Data



Data Analysis

Top 20 Stations by Entry Volume, 8/27-9/16 Plus 3 smaller stations to improve university outreach

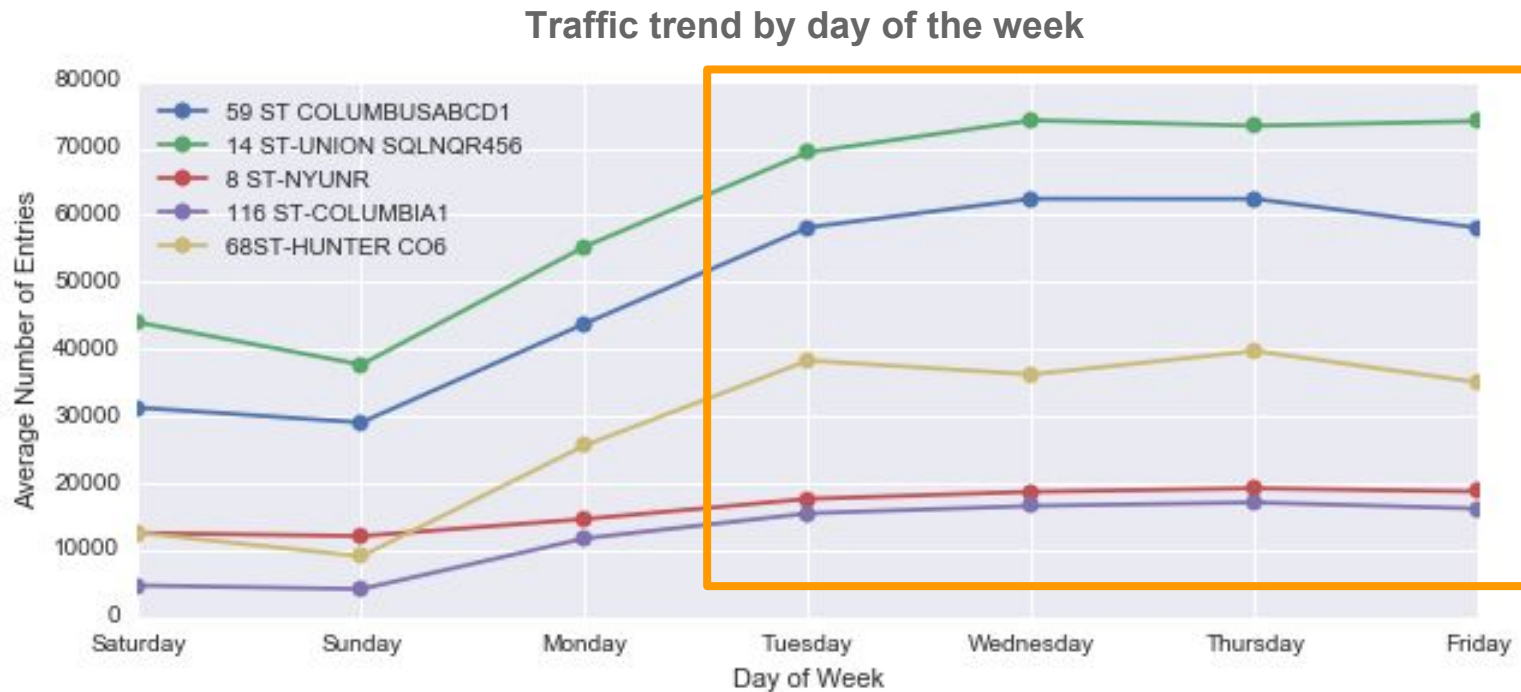


Stations of Interest (in Red):

- ★ 34 St Herald Square
- ★ 14 St Union Square
- ★ 86 St
- ★ 59 St Columbus Circle
- ★ W 4 St Wash Square
- ★ 42 St Bryant Park
- ★ 68 St Hunter
- ★ 8 St - NYU
- ★ 116 St - Columbia

Data Analysis Cont.

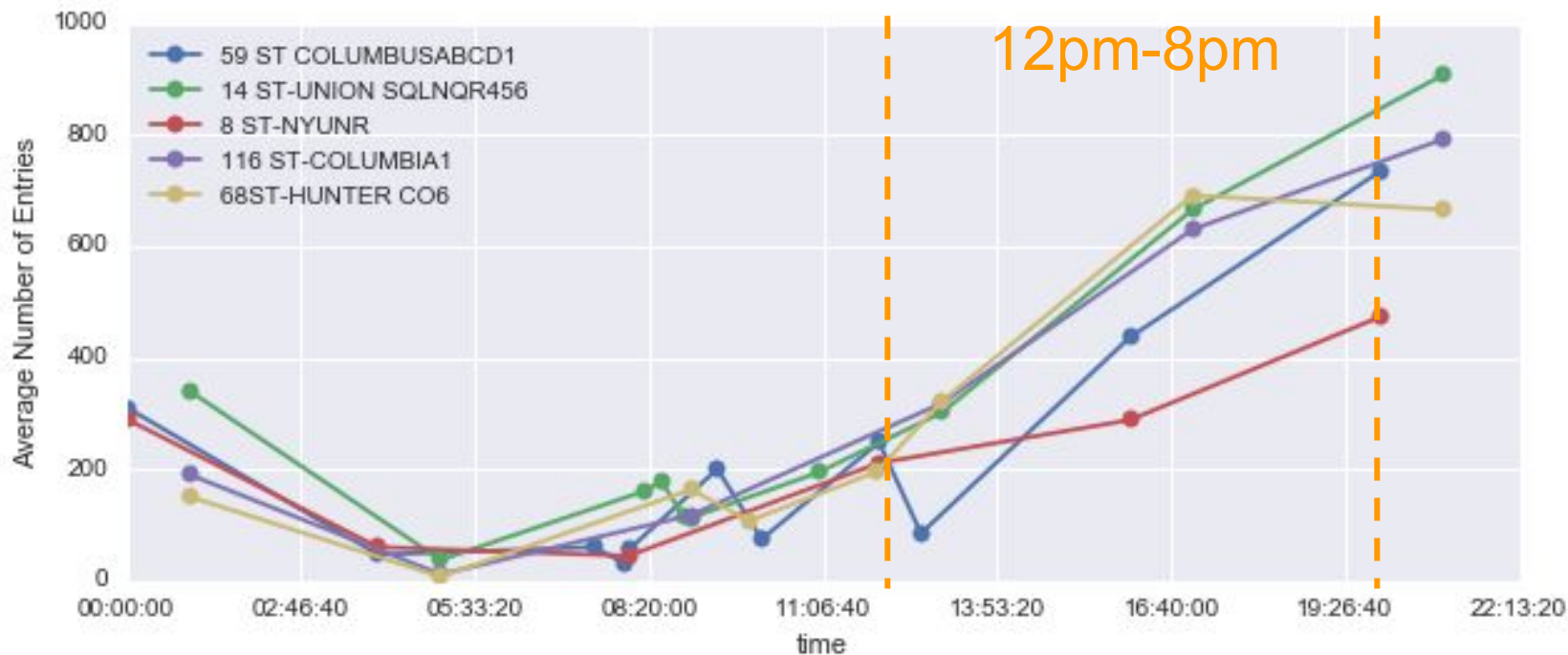
- Next, a closer look at 5 selected stations by day of the week



Data Analysis Cont.

- Finally, a closer look at 5 of the selected stations by time of day

Traffic trend by time of day

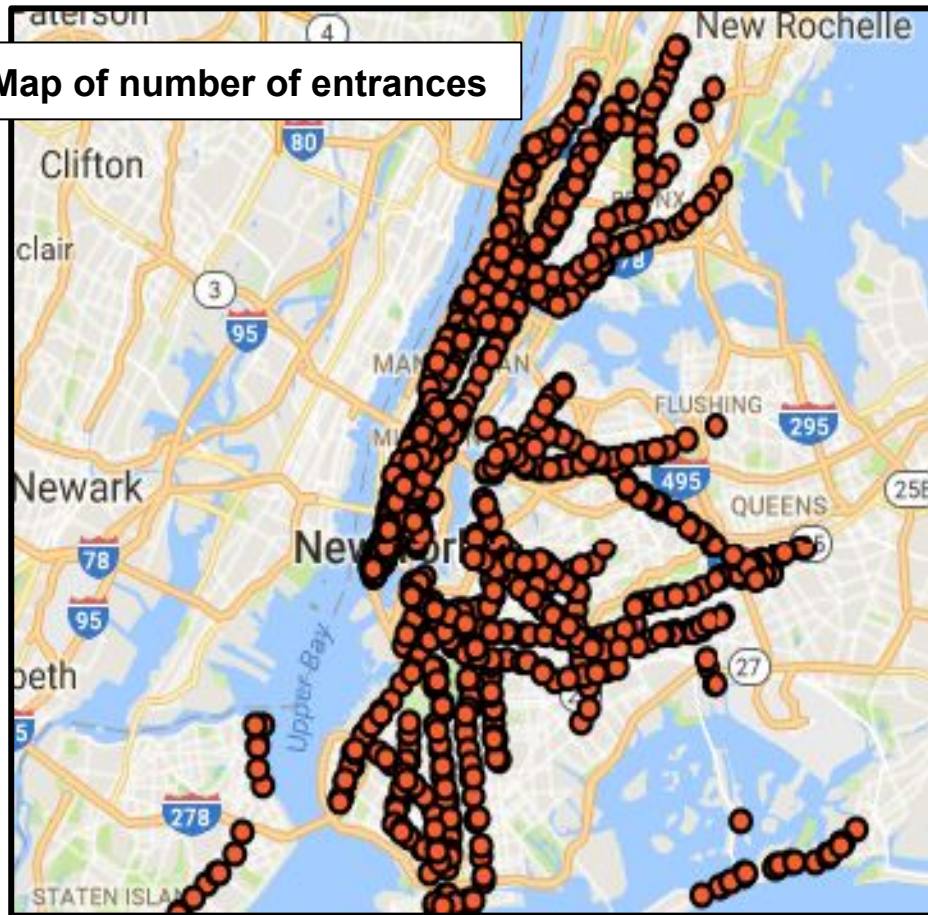


Subway stats

- 469 (24/7) stations*
- 1.763 billion riders in 2015*
- Many stations in close proximity to each other

* mta.info

Map of number of entrances





**MULTIPLE Entrances
per subway**

Our Recommendations

- 12pm-8pm time frame
- Weekdays Tues-Fri
- 1 volunteer canvasser per entrance

Full coverage:

- 592 man-hours per day (74 entrances, 8-hr days)

Station Name	Lines Served	Entrances
34 St - Herald Square	B,D,F,M,N,Q,R	14
14 St - Union Square	L,N,Q,R,4,5,6	12
59 St - Columbus Circle	A,B,C,D,1	11
W4 St - Wash Square	A,B,C,D,E,F,M	2
68 St - Hunter	6	5
42 St - Bryant	B,D,F,M,7	9
86 St	4,5,6	8
8 St - NYU	N,R	8
116 St - Columbia	1	5

Next Steps

- Include more turnstile data (all five boroughs)
- Consider smaller tech industries hubs
- Consider average income data for fundraising efforts
- Determine size of teams needed per station
- Apply social psychology modeling (or incorporate existing models), i.e. why do people stop

THANK you

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