Optimal Contact Collection at MTA Stations for WTWY Gala

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9/28/18
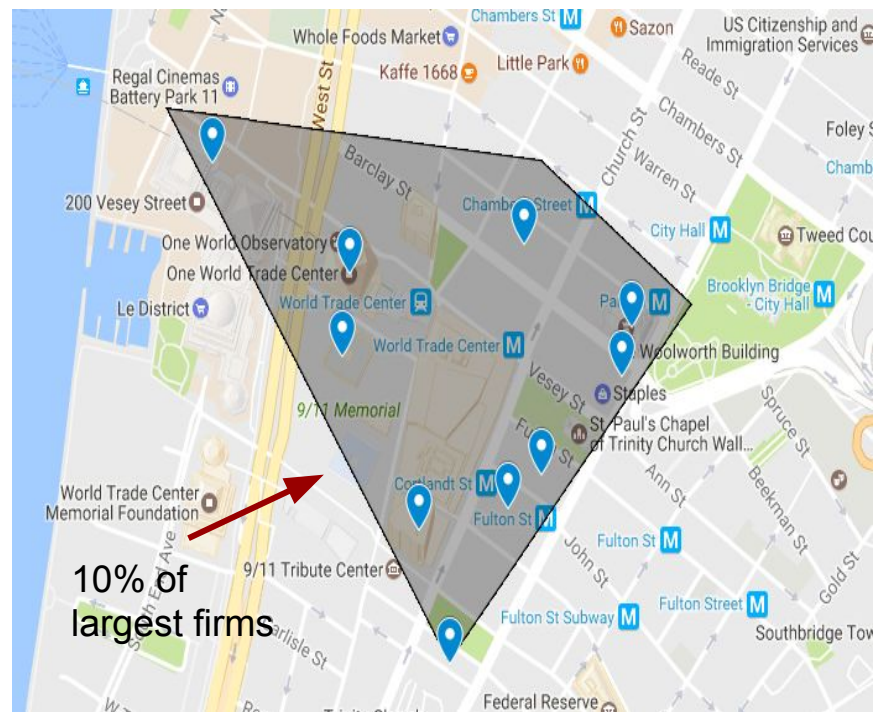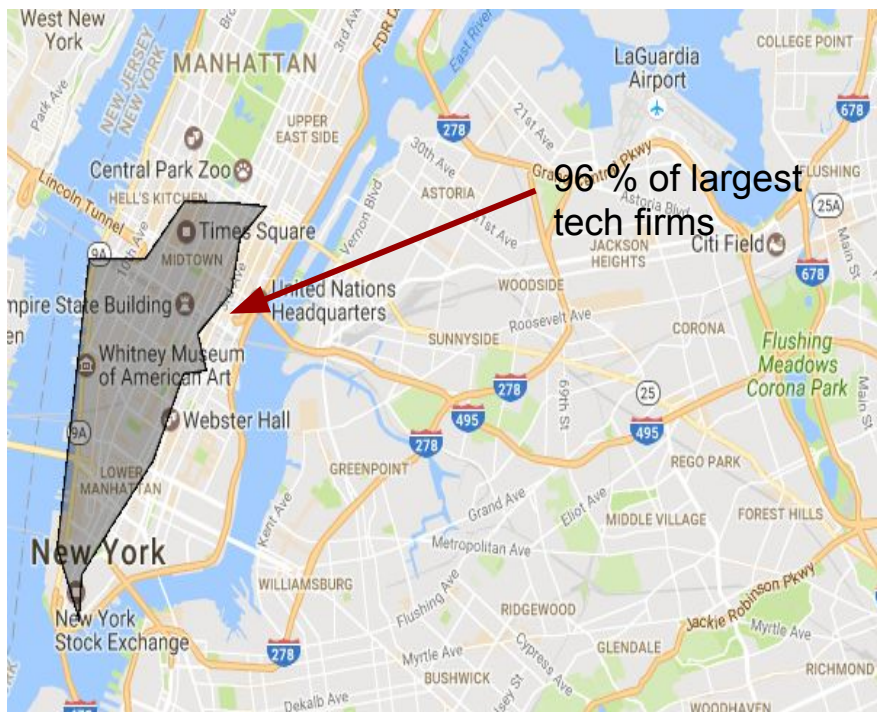
Objective and Method

❖ Determine best stations to place street teams for WTWY Gala

❖ Filter MTA turnstile data by:
  ➢ Location
    ■ Lower Manhattan tech zone
  ➢ Timeframe
    ■ Spring 2016-18

❖ Identify highest traffic stations

NYC's "Silicon Alley"

96 % of largest tech firms

10% of largest firms

Source: https://www.builtinnyc.com/2016/12/13/big-tech-companies-nyc-locations

Assumptions

❖ Tech employees most likely to support WTWY

❖ Smaller tech firms located near large ones

❖ Stations are busiest right before/after work

Data Collection and Processing - Location

1. Retrieve station coordinates

2. Filter out stations not in 'Silicon Alley'

3. Identify highest priority station locations (those
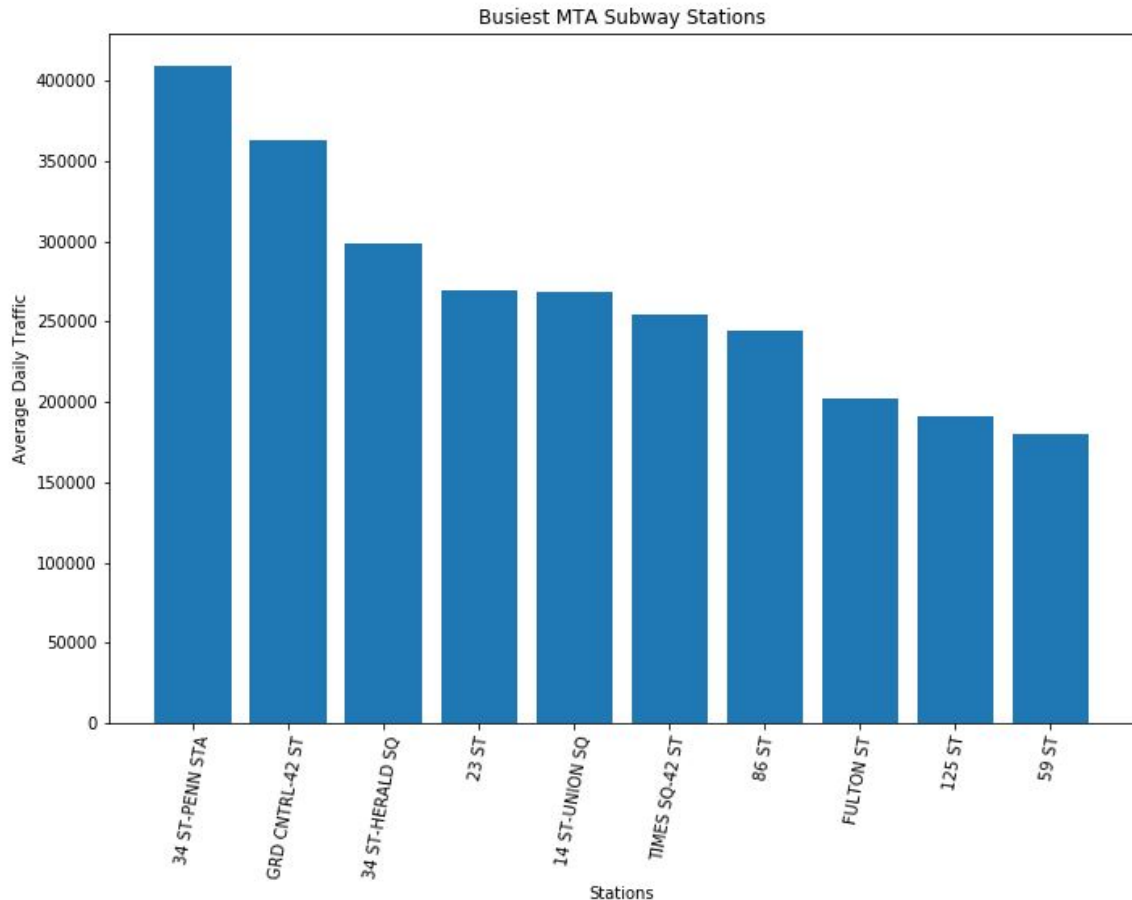
   next to smaller cluster of many tech firms)

Data Collection and Processing - Traffic

1. Collect turnstile data

2. Filter turnstiles that are outside of map coordinates

3. Find remaining stations with highest traffic

4. Reconcile station name differences between station

    entrance and turnstile data sources

Highest Traffic Stations

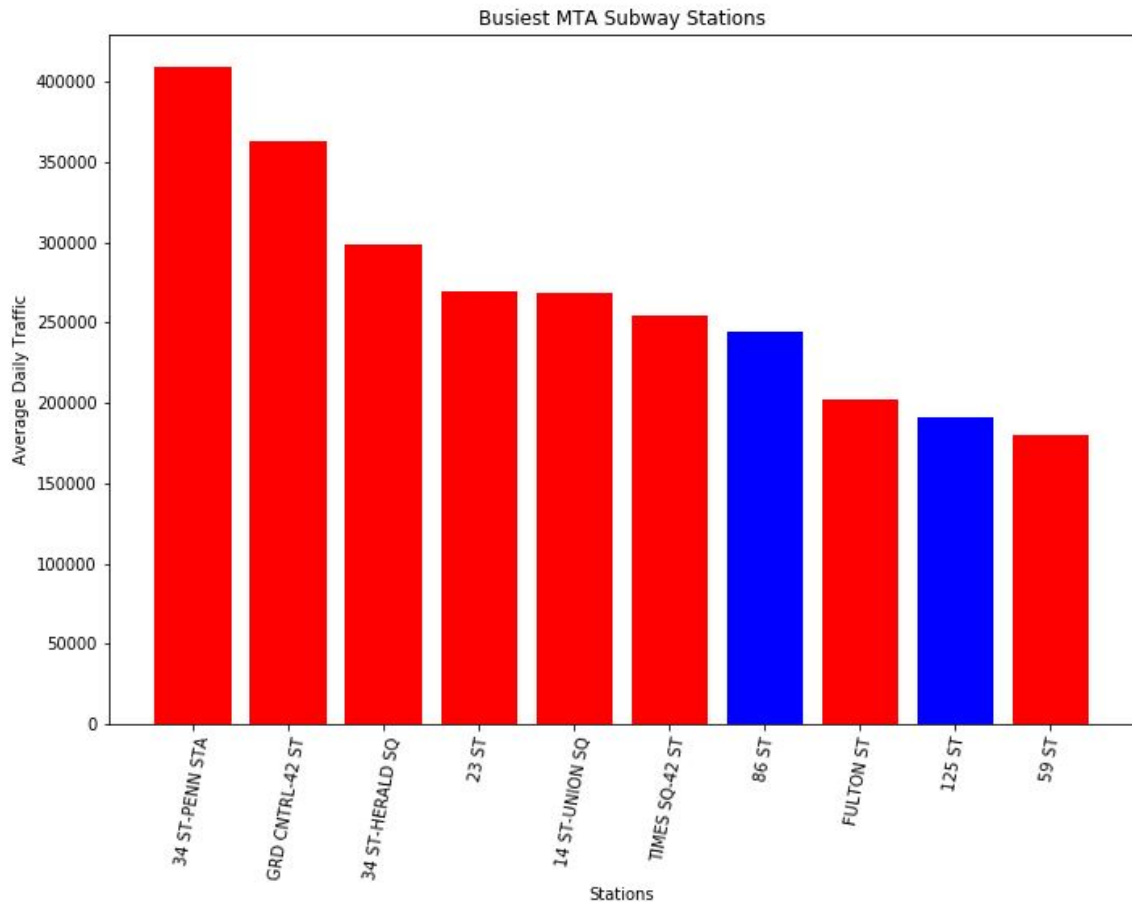Average Daily Traffic calculated from sum of daily entries and exits

Send people to highest traffic stations within tech zone

Busiest MTA Subway Stations

Highest Traffic Stations

Average Daily Traffic calculated from sum of daily entries and exits

Send people to highest traffic stations within tech zone
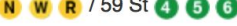

Busiest MTA Subway Stations

Sanity Check

The busiest subway stations according to MTA's website:

The Ten Busiest Subway Stations 2016

Station and Subway Lines	Borough	Annual Ridership
1. Times Sq-42 St N Q R W S 1 2 3 7 / 42 St A C E	Manhattan	64,531,511
2. Grand Central-42 St S 4 5 6 7	Manhattan	46,121,509
3. 34 St-Herald Sq B D F M N Q R W	Manhattan	39,000,352
4. 14 St-Union Sq L N Q R W 4 5 6	Manhattan	34,289,822
5. 34 St-Penn Station 1 2 3	Manhattan	27,741,367
6. 34 St-Penn Station A C E	Manhattan	25,183,869
7. Fulton St A C J Z 2 3 4 5	Manhattan	25,162,937
8. 59 St-Columbus Circle A B C D 1	Manhattan	23,203,443
9. Lexington Av N W R / 59 St 4 5 6	Manhattan	21,000,635
9. 86 St 4 5 6	Manhattan	20,337,593

Source: http://web.mta.info/nyct/facts/ffsubway.htm

Recommendations for WTWY

❖ Target core Silicon Alley stations:

➤ Fulton St & Chambers St

❖ Target busiest Silicon Alley stations:

➤ Grand Central & Penn. Station

➤ 14th St - Union Square

❖ Send street team to all Silicon Alley stations if possible

Appendix A - More to Investigate

❖ Are there stations where many tech employees live nearby?

❖ Best to send extra people to high traffic stops with many entrances?

❖ Areas with high density of start-ups/small tech firms?

❖ Optimal timespan before gala to approach people?

Appendix B - Highest Traffic Stations

The following stations are ranked from highest to lowest traffic in Silicon Alley:

1) 34th St - Herald Sq.

2) 14th St - Union Square

3) Times Square - 42nd St

4) 23rd St

5) Fulton St

6) 59th St

7) Canal St

8) 14th St

9) Chambers St

10) 28th St

11) 50th St

12) Wall St

Heuristic: Advertise west of Q & R lines in middle and lower Manhattan

Appendix C - Data Cleaning

Issues in Data Analysis:

Current method for string matching in station names is crude.

Initial "in Manhattan" filtration missed a few high-traffic stations, such as:

    Grand Central

    34th St & Penn