# WomenTechWomenYes Gala

Using Data Science for Outreach Optimization

April 14, 2017

#### Introduction

WomenTechWomenYes (WTWY) is hosting an annual gala on May 30th, 2017.

The gala is meant to bring together individuals passionate about increasing the participation of women in technology, and to concurrently build awareness and reach.

Data JaM Consulting is to help WTWY with outreach optimization using data science.

### Approach

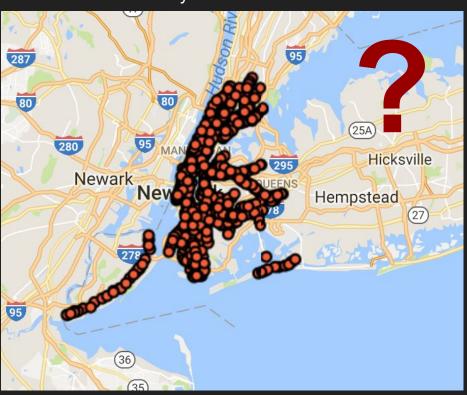
There are 355 subway station entrances in NYC → need to prioritize

#### What to prioritize on:

- High volume foot traffic
- Proximity to responsive audience

Hypothesis: people with (or seeking) higher education are more responsive to WTWY agenda

#### NYC Subway Entrances Locations



#### Data

MTA Weekly turnstiles data for 10 weeks of Spring 2016 and 2017

http://web.mta.info/developers/turnstile.html

Geo location information of MTA Station Entrances

http://web.mta.info/developers/data/nyct/subway/StationEntrances.csv

Geo location of Colleges and Universities in NYC

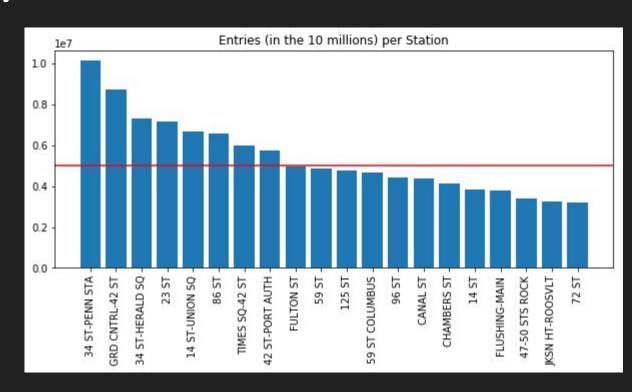
https://data.cityofnewyork.us/Education/Colleges-and-Universities/4kym-4xw5/data

#### NYC Busiest Subway Stations

Summary of MTA daily foot traffic allows us to rank stations based on their access to bigger audience

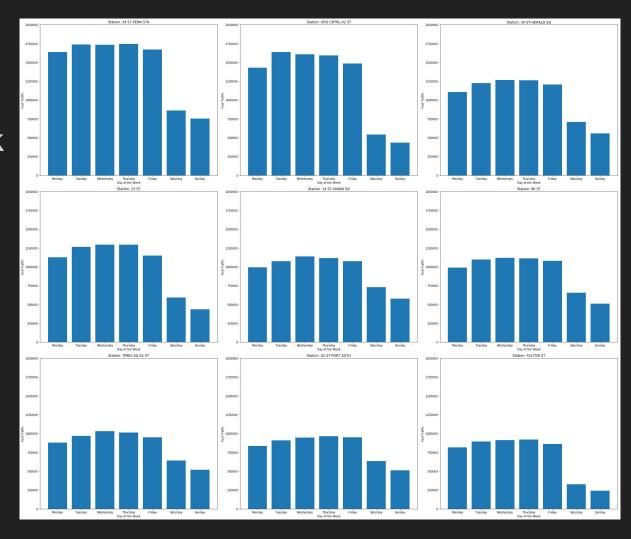
The busiest stations are 34th/Penn Station and Grand Central/42 St

There is very little differentiation in stations with 10-week traffic less than 5MM  $\rightarrow$  focus on the top 9



# NYC Top Busiest Subway Stations: Foot Traffic per Week Day

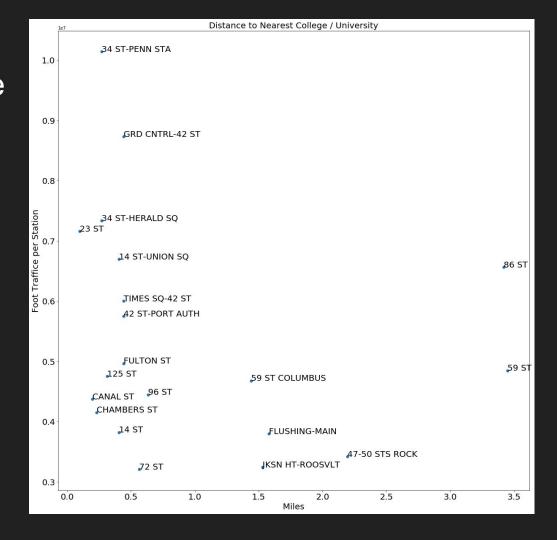
All stations demonstrate the same traffic pattern that peaks mid-week and subsides during the weekend



### Distance of NYC Busiest Subway Stations from the Nearest Campus

Top <u>left</u> quadrant represents stations with highest foot traffic and closest to the nearest campus:

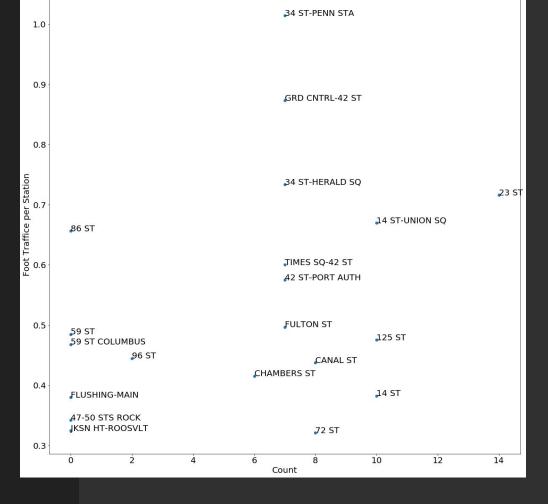
34 St - Penn Station Grand Central - 42 St 34 St - Herald Sq 23 St 14 St - Union Sq



# Number of Campuses within 1 Mile of NYC Busiest Subway Stations

Top <u>right</u> quadrant represents stations with highest foot traffic that are close to the most campuses:

23 St 14 St - Union Sq 34 St - Penn Station Grand Central - 42 St 34 St - Herald Sq



Number of Colleges / Universities within 1 Mile

#### Recommendation

WTWY should place their street teams at the following stations

- 23 St
- 14 St Union Sq
- 34 St Penn Station
- Grand Central 42 St
- 34 St Herald Sq

This will maximize their reach while minimizing resources

## Thanks!

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