



WomenTechWomenYes (WTWY)

STREET TEAM PLACEMENT RECOMMENDATIONS 2021

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Project Goals

- ▶ Provide recommendations on the best subway stations to place WTWY street teams at in order to gather email addresses of people interested in attending the annual gala and/or donating to the organization
- ▶ Identify NYC area MTA subway stations with the most traffic
- ▶ Compare those stations to Big Tech companies office locations to find target audience
- ▶ Provide insight into the minimum, maximum and average number of volunteers needed to cover these stations



Photos by ABC7NY.com and Paula Silva on Unsplash

Data Sources and Tools

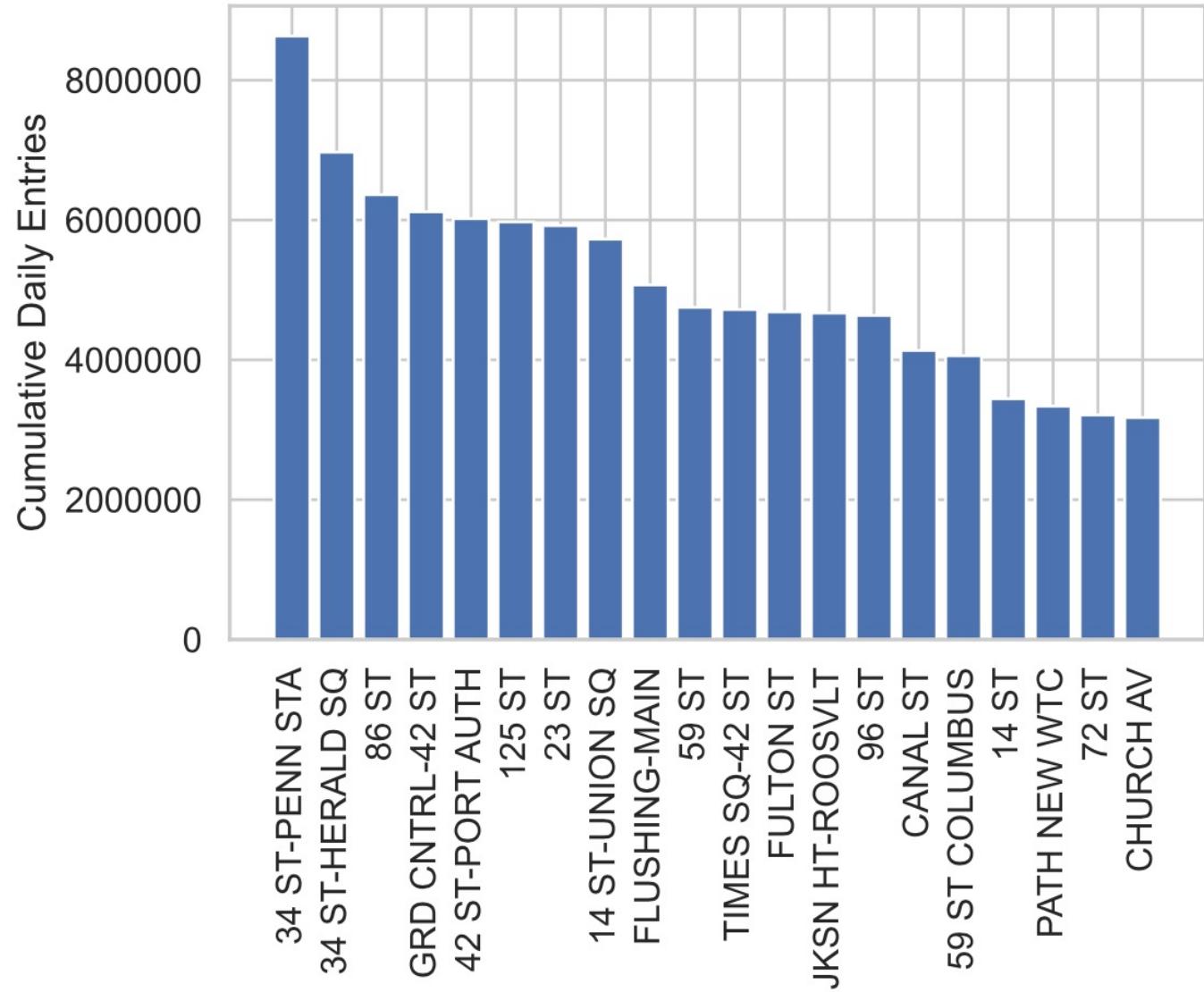
- ▶ SQLAlchemy, Pandas and matplotlib were used to analyze, clean, filter, sort and visualize the data.
- ▶ MTA publicly available data set on daily entries and exits from turnstiles
- ▶ One feature that describes the data is cumulative daily entries per turnstile and station YTD 9/3/2021.

C/A	UNIT	SCP	STATION	DATE	ENTRIES	PREV_DATE	PREV_ENTRIES	DAILY_ENTRIES
1	A002	R051	02-00-00	59 ST	01/02/2021	7511996	01/01/2021	7511647.0
2	A002	R051	02-00-00	59 ST	01/03/2021	7512214	01/02/2021	7511996.0
3	A002	R051	02-00-00	59 ST	01/04/2021	7512754	01/03/2021	7512214.0
4	A002	R051	02-00-00	59 ST	01/05/2021	7513300	01/04/2021	7512754.0
5	A002	R051	02-00-00	59 ST	01/06/2021	7513790	01/05/2021	7513300.0

Methodology

Examine Station Traffic Volume

- ▶ Highest volume station is the 34th Street Penn Station.
- ▶ Positioning volunteers at this station will be important to capturing people interested in supporting women in technology
- ▶ Facebook leased office space at the post office complex next to Penn Station (1)

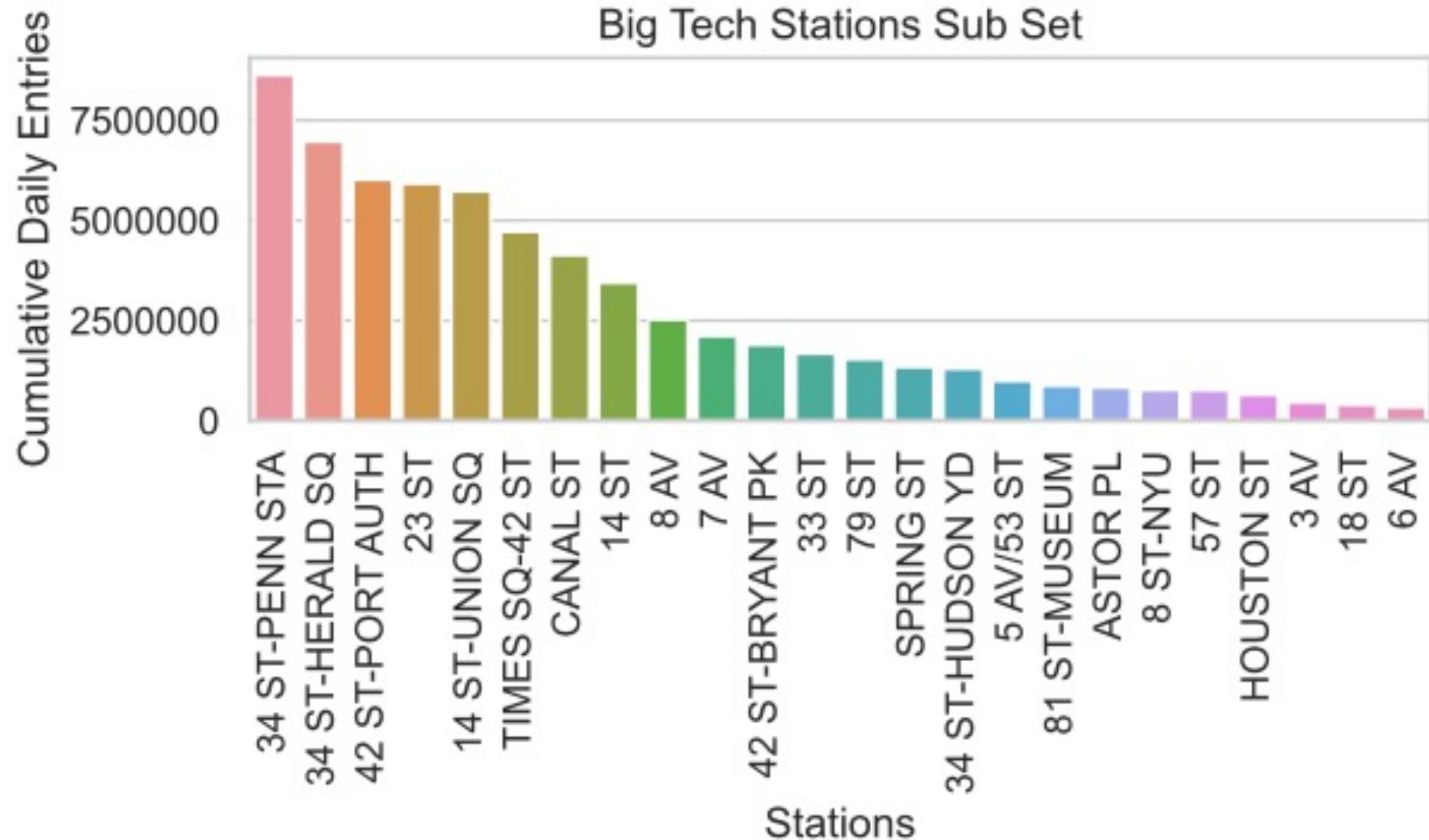


Identify Big Tech Co Office Locations

- ▶ Why America's tech giants are flocking to one part of NYC
- ▶ Shows a concentration of tech workers in Manhattan
- ▶ Layer on to determine Street Team Placement
- ▶ Recommendations for Big Tech In Priority order
- ▶ Yahoo Finance article by Sarah Paynter and Krystal Hu from January 5, 2020:



Compare Big Tech Co Office Locations and Station Volume



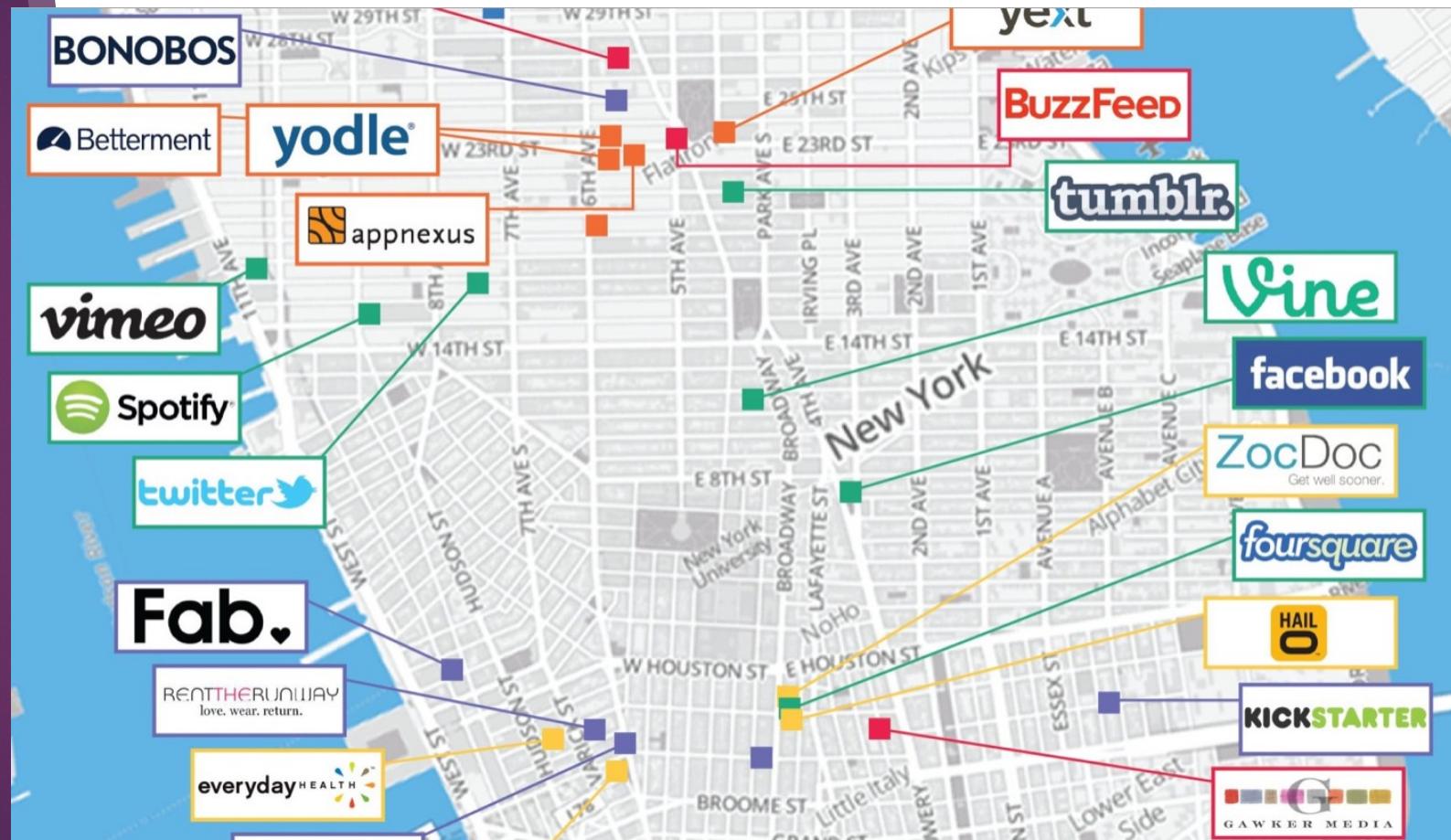
Street Teams MINIMUM for success = 5

- ▶ One Street Team at each location
 - ▶ 34th and Penn Station – overall busiest and 4 Amazon Offices in the area
 - ▶ 14 St / 6 AV – the only location for Apple and 1 location for Netflix
 - ▶ 23rd St – 2 locations for Netflix, 1 location for Facebook
 - ▶ 34 Hudson Yards Station – 4 locations for Facebook, 1 for Amazon
 - ▶ 14 St / 8 AV – 4 Locations for Google, 2 for Netflix
- ▶ Covers the Big Tech Office Locations

Tech Start Ups

- ▶ The End of 2018 Marks A Diverse New York Startup Ecosystem
- ▶ “NYC stands out as one of the most diverse business scenes in the world: 19% of founders are women, compared to the 16% global average, and 25% are immigrant founders, compared to the 19% global average.”
- ▶ *FINSMES Article published Sep 5, 2018*

**Max # of Street Teams = 35
15 Big Tech + 20 Start Ups**



Source: FINSMES – Real Time VC and Private Equity Deals and News
<https://www.finmes.com/2018/09/the-end-of-2018-marks-a-diverse-new-york-startup-ecosystem.html>

Optimum # of Street Teams = 15

Street Team Placement Recommendations for Big Tech In Priority order

3 teams per location for top 2 locations

2 team for next 3 busiest stations and Apple location

1 team for remaining 1 location

- ▶ 34th and Penn Station – 3 locations for Amazon
- ▶ 23rd St – 2 locations for Netflix, 1 location for Facebook
- ▶ 34 Hudson Yards Station – 4 locations for Facebook, 1 for Amazon
- ▶ 14 St Union Sq – 1 location for Facebook, 1 for Netflix
- ▶ 14 St / 8 AV – 4 Locations for Google, 2 for Netflix
- ▶ 14 St / 6 AV – the only location for Apple and 1 location for Netflix
- ▶ 18 Street Station – 2 locations for Google and 1 for Netflix

Further Analysis to Improve Outcomes

- ▶ Start Up Tech Company Analysis similar to the Big Tech analysis, in order to ensure a diverse group is reached
- ▶ Further Data Segmentation
 - ▶ Segment the data into time intervals of am, pm and lunch intervals to the traffic patterns to further fine tune high traffic times
 - ▶ Days/Weeks/Months - Include graphs for days of the week, weeks of the month and months of the year to determine traffic peaks and valleys
- ▶ Additional Data Sources
 - ▶ Commercial Real Estate Data, connect to MTA data for easier updates for use in future WTWY event planning
 - ▶ Mapping software to improve proximity of station entrances to tech companies
 - ▶ WTWY membership list – compare with Big Tech and Start up lists to see where more awareness is and is needed

<https://www.nytimes.com/2020/10/13/nyregion/big-tech-nyc-office-space.html>

<https://finance.yahoo.com/news/why-americas-tech-giants-are-flocking-to-one-part-of-nyc-130830663.html>

<https://data.cityofnewyork.us/Transportation/Subway-Entrances/drex-xx56>

Sources

Appendix

Big tech office locations and nearest subway stations

Column1	Column2	Column3
Big Tech Company	Office Address	Subway Station
Apple	100 Fifth Ave	14 st / 6 Av
Netflix	888 Broadway	14 st / 6 Av
Google	85th 10th Ave	14 ST / 8 AV
Google	Pier 57	14 ST / 8 AV
Google	450 W 15th Street	14 ST / 8 AV
Google	Chelsea Market	14 ST / 8 AV
Netflix	80 8th Ave	14 ST / 8 AV
Netflix	245 W17th St	14 ST / 8 AV
Facebook	225 Park Ave S	14 St- Union Sq
Netflix	888 Broadway	14 St- Union Sq
Google	111 8th Ave	18 Street Station
Google	111 8th Ave	18 Street Station
Netflix	245 W17th St	18 Street Station
Facebook	225 Park Ave S	23 St
Netflix	245 W17th St	23 St
Netflix	888 Broadway	23 St
Netflix	888 Broadway	23rd station at 5th ave
Netflix	245 W17th St	23rd Street Station
Facebook	770 Broadway	3 Av
Amazon	7 W 34th St	33 St
Facebook	30 Hudson yards	34-Hudson Yards
Facebook	50 Hudson yards	34-Hudson Yards
Facebook	55 Hudson Yards	34-Hudson Yards
Amazon	5 Manhattan West	34-Hudson Yards
Amazon	5 Manhattan West	34th and Penn Station
Amazon	230 W 41st St	34th and Penn Station
Amazon	7 W 34th St	34th and Penn Station
Amazon	7 W 34th St	34th Herald Sq
Amazon	230 W 41st St	42 st Bryant Park Station
Amazon	230 W 41st St	42nd st port authority
Amazon	1350 Avenue of the Americas	5 avenue 53 st station
Amazon	1350 Avenue of the Americas	57 Street
Amazon	1350 Avenue of the Americas	7 Avenue Station
Amazon	410 10th Ave	79th St
Facebook	770 Broadway	8 Street Station
Amazon	410 10th Ave	81st Museum of Natual History
Facebook	770 Broadway	Astor Pl
Amazon	350 W Broadway	Canal St
Google	315 Hudson Street	Houston St
Google	345 Hudson Street	Houston St
Google	550 Washington St	Houston St
Google	315 Hudson Street	Spring St
Google	345 Hudson Street	Spring St
Google	550 Washington St	Spring St
Amazon	350 W Broadway	Spring St
Amazon	230 W 41st St	Times Sq 42nd st