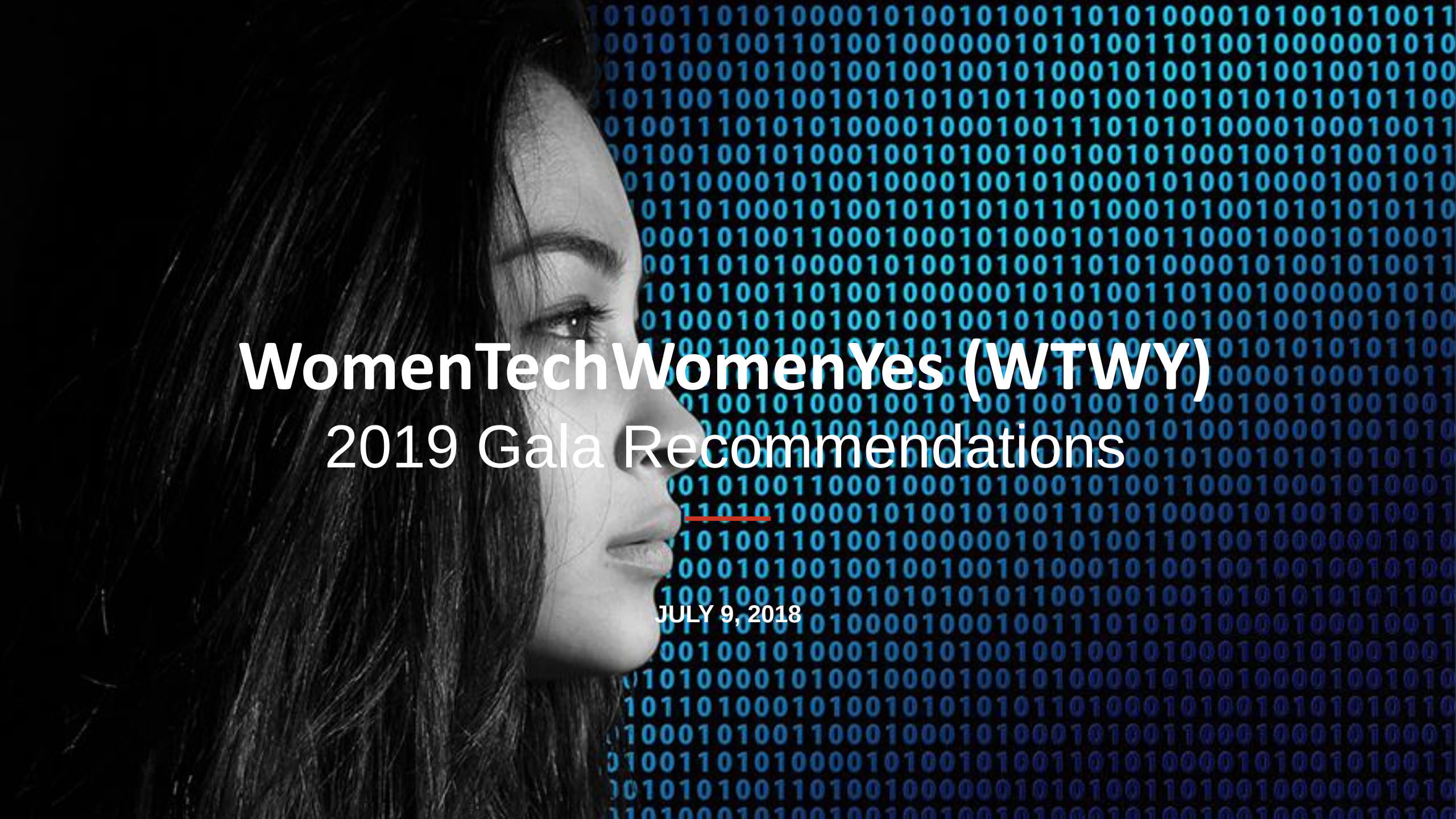


WomenTechWomenYes (WTWY)

2019 Gala Recommendations

JULY 9, 2018

OVERVIEW

- The challenge you gave us is to develop strategies designed to increase attendance at next year's gala scheduled for the first week of June

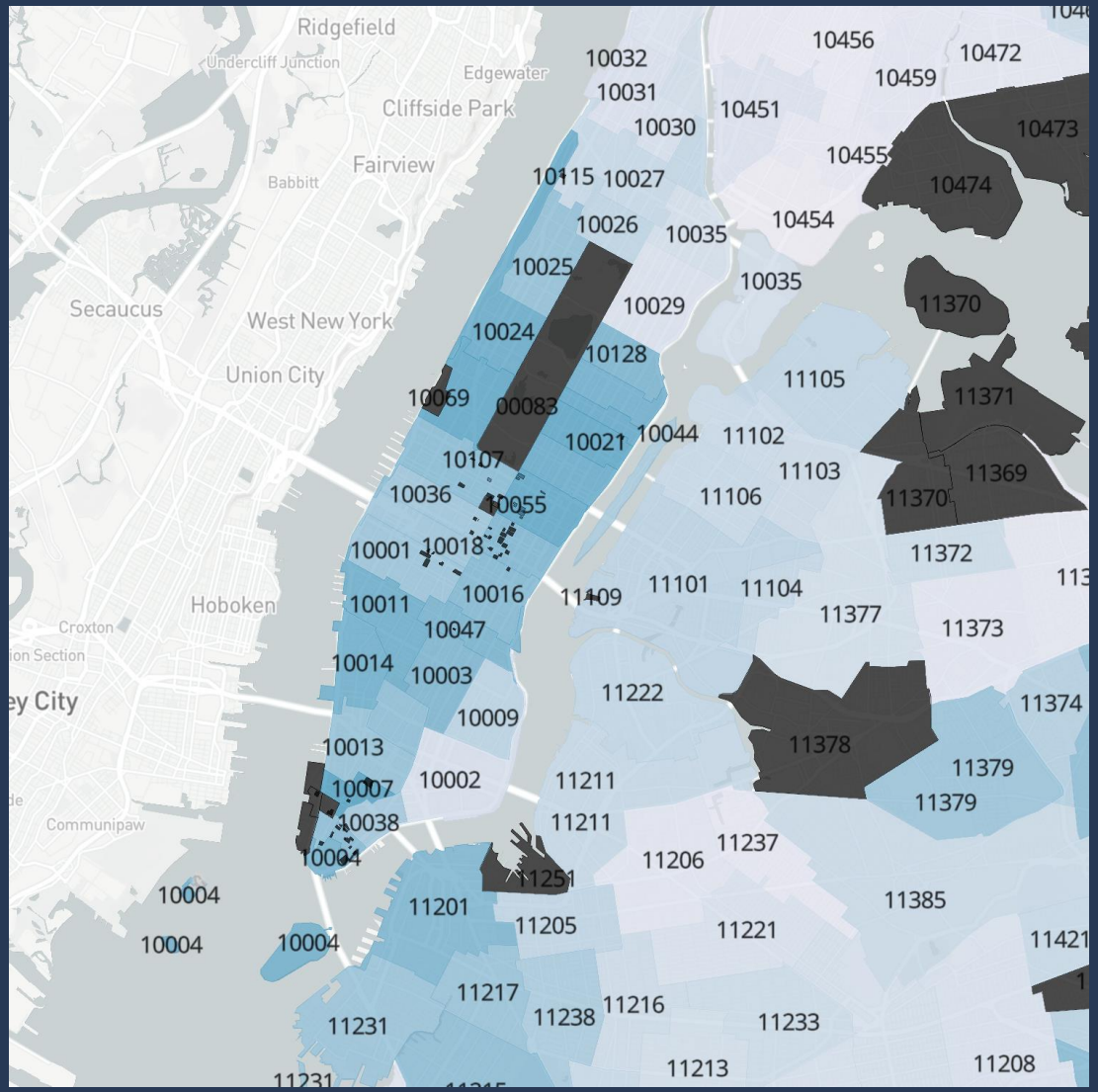
- The goal of the project is to utilize publically available data to develop recommendations on where and when to deploy street teams in order to maximize the collection of email addresses from individuals who are likely to attend the gala and contribute to the cause.

KEY ASSUMPTIONS

- Individuals who live in areas with higher donor penetration will have a higher propensity to engage and contribute to charitable causes
- Individuals who live or work in areas with a greater density of technology companies will have a higher propensity to engage and participate in technology related causes
- Higher station volume within the target geography will correlate with greater street team effectiveness
- A dozen street team members, working in pairs, are available for deployment at any given time
- Need to deploy street teams in April 2019 based on the required lead time for the gala scheduled the first week of June 2019
- April 2018 MTA turnstile data is representative of expected station volume during April 2019 street team deployment

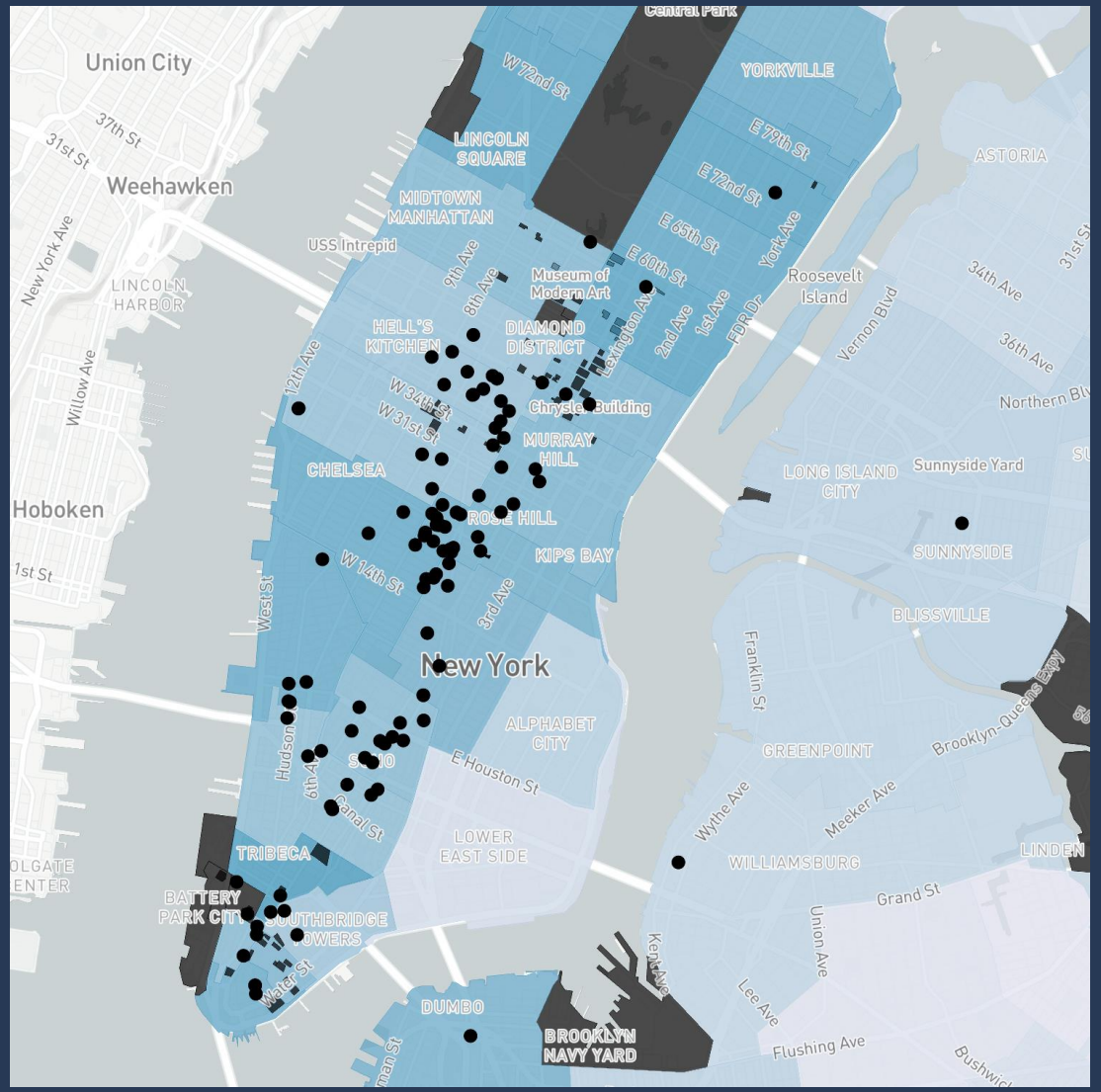
Note: Detailed descriptions on the data sources are available in the appendix

ANALYSIS



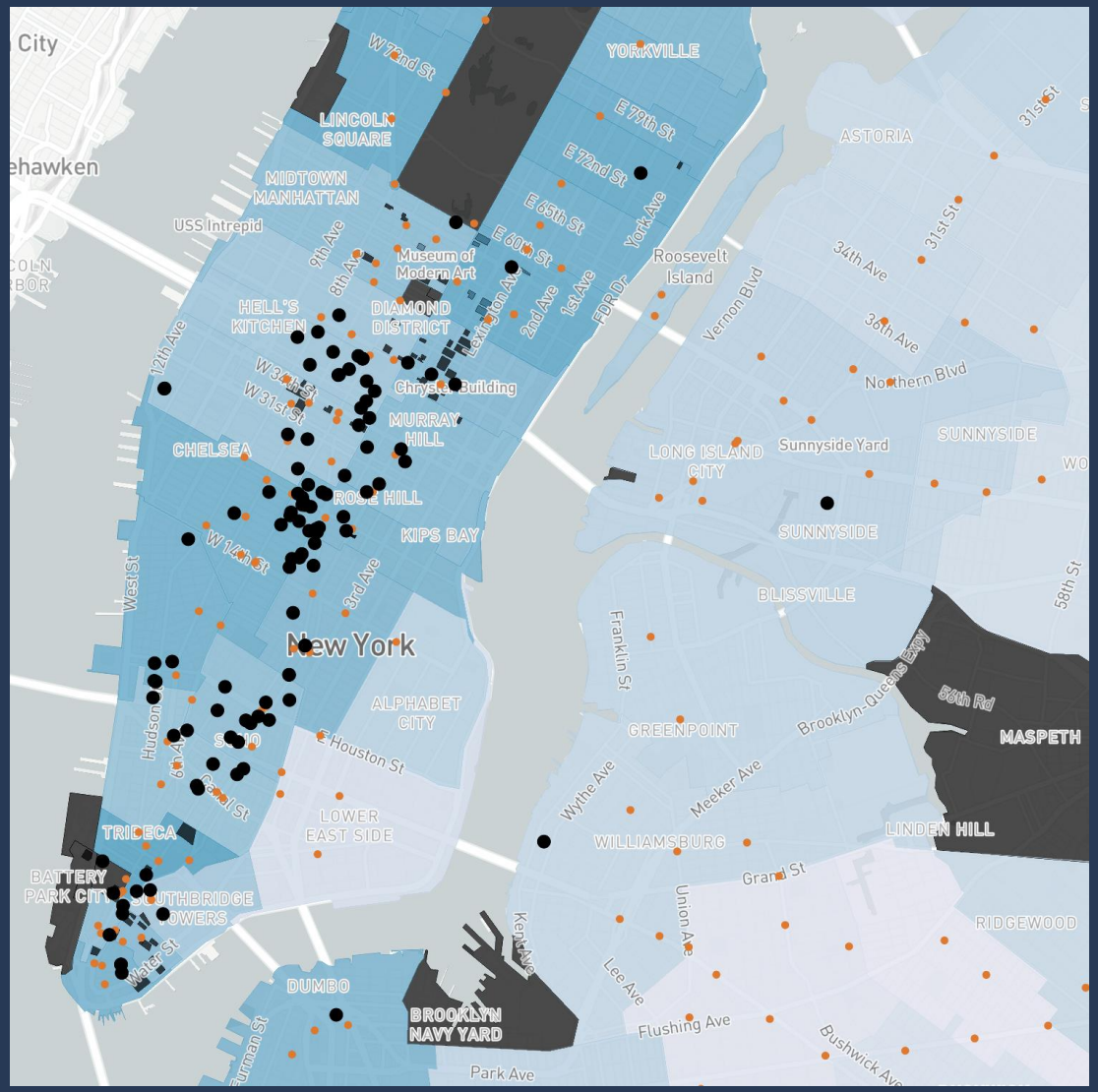
- **Donor penetration by zip code**
  - ✓ Identified 33 (of 131) zip codes where the percentage of individuals claiming charitable deductions was greater than 38%

ANALYSIS



- **Technology company penetration by zip code**
  - ✓ Identified 8 (of 26) zip codes where 5 or more technology companies are located

ANALYSIS



- **Technology company penetration and MTA station locations by zip code**

ANALYSIS

Zip Code	Percent Donors	Number of Tech Companies
10003	47.2%	8
10010	49.0%	16
10011	52.7%	5
10012	41.1%	10
10013	38.8%	7
10014	51.6%	5

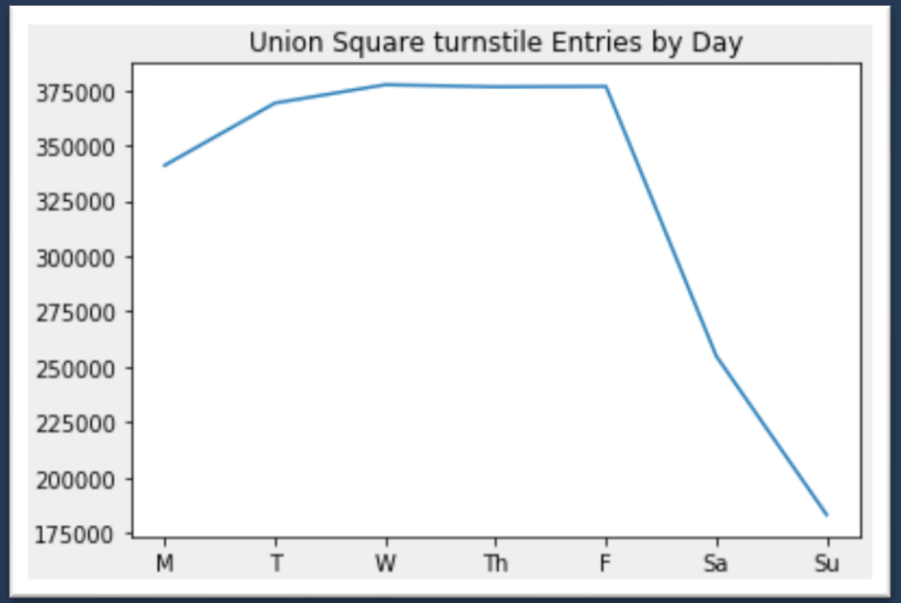
- We combined the selected Donor penetration and Technology company density zip code lists to produce our final target geography

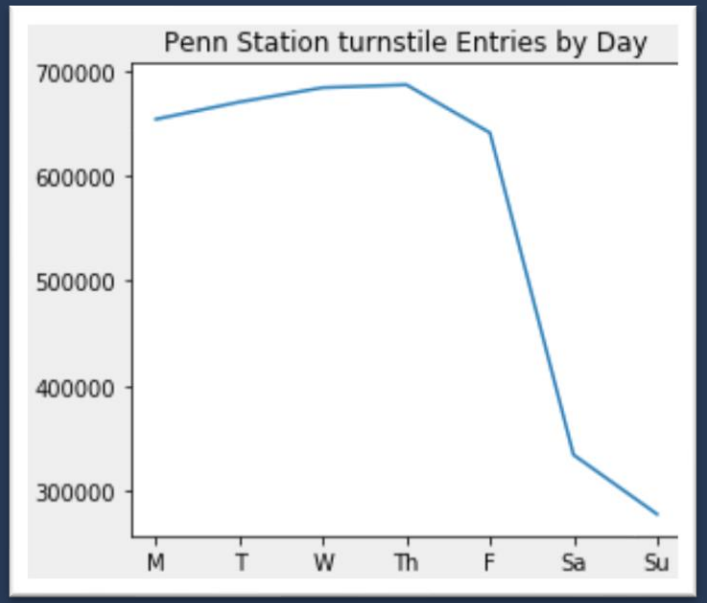
ANALYSIS

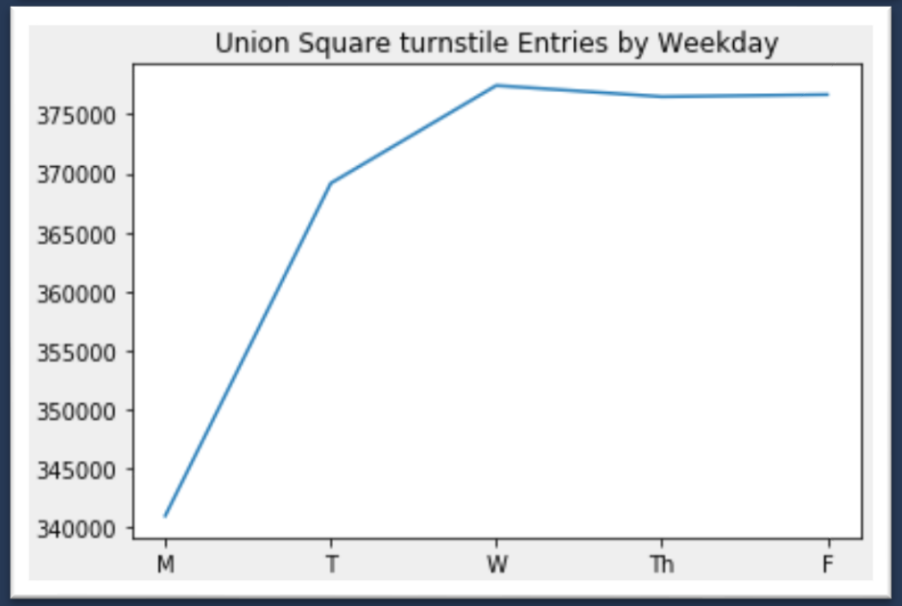
- 22 MTA stations located within 6 target zip codes
- Union Square and Penn Station have highest traffic
- No single unit to congregate at 23rd street station platform

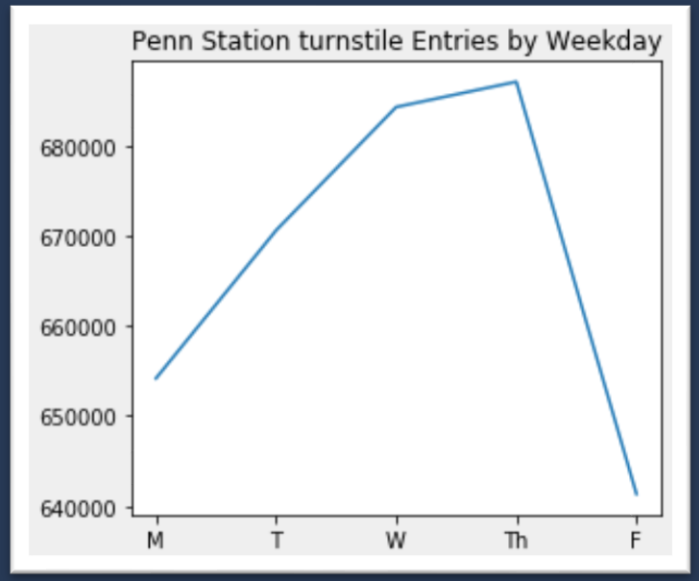
zip	unit	station	ppl
10003	R170	14 ST-UNION SQ	2,278,722
10011	R012	34 ST-PENN STA	1,482,310
10014	R138	W 4 ST-WASH SQ	893,649
10010	R083	23 ST	600,107
10011	R111	23 ST	573,221
10010	R131	23 ST	555,348
10011	R175	8 AV	529,497
10013	R463	CANAL ST	490,828
10011	R013	34 ST-PENN STA	490,308
	R105	14 ST	476,854

ANALYSIS

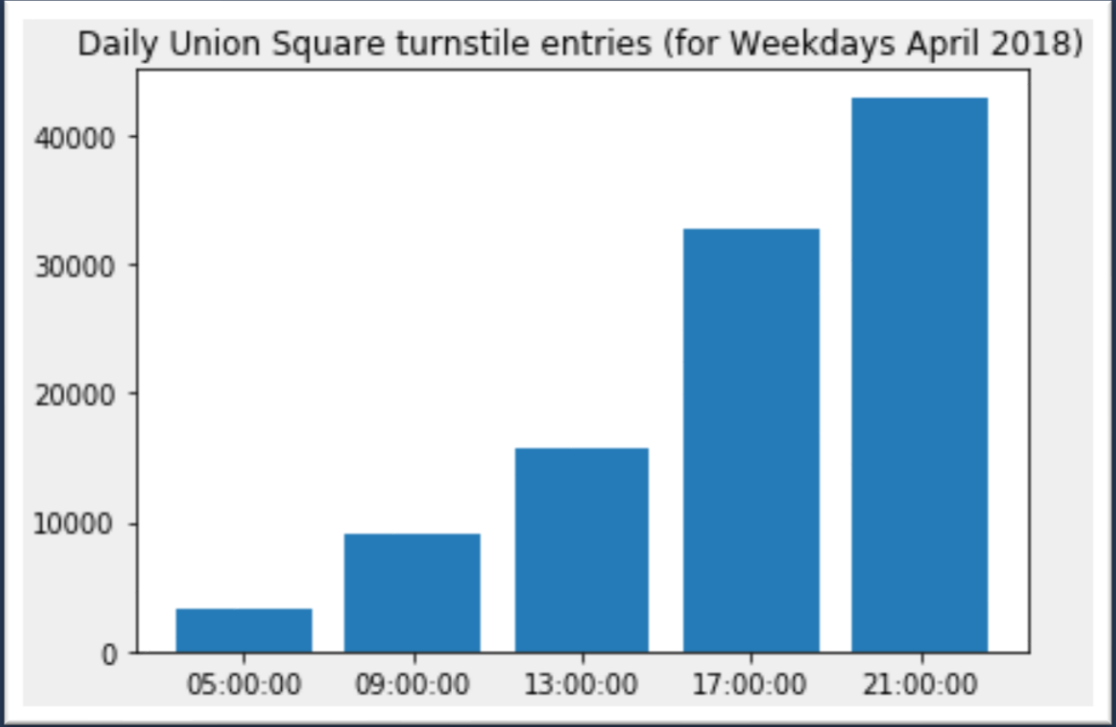

Union Square turnstile Entries by Day
375000
350000
325000
300000
275000
250000
225000
200000
175000
M
T
W
Th
F
Sa
Su


Penn Station turnstile Entries by Day
700000
600000
500000
400000
300000
M
T
W
Th
F
Sa
Su


Union Square turnstile Entries by Weekday
375000
370000
365000
360000
355000
350000
345000
340000
M
T
W
Th
F


Penn Station turnstile Entries by Weekday
680000
670000
660000
650000
640000
M
T
W
Th
F

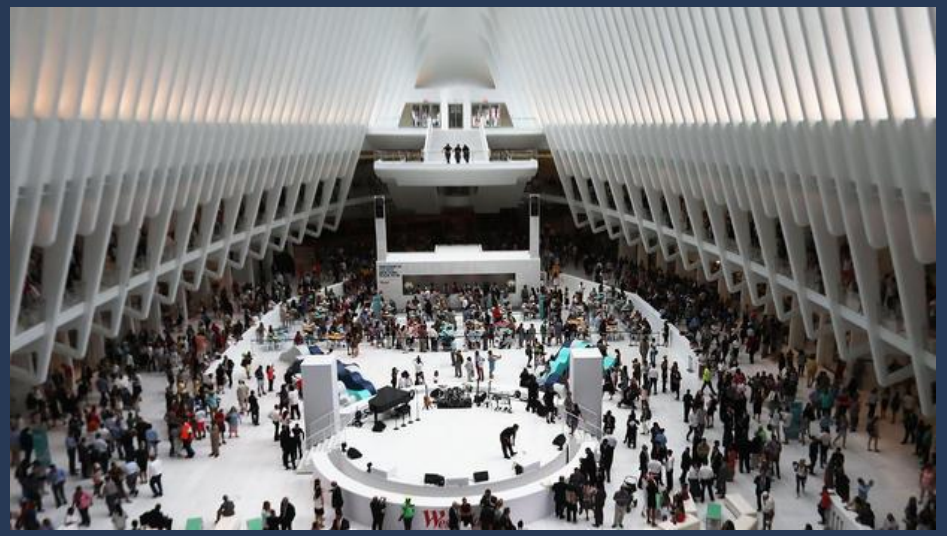
REOMMENDATIONS

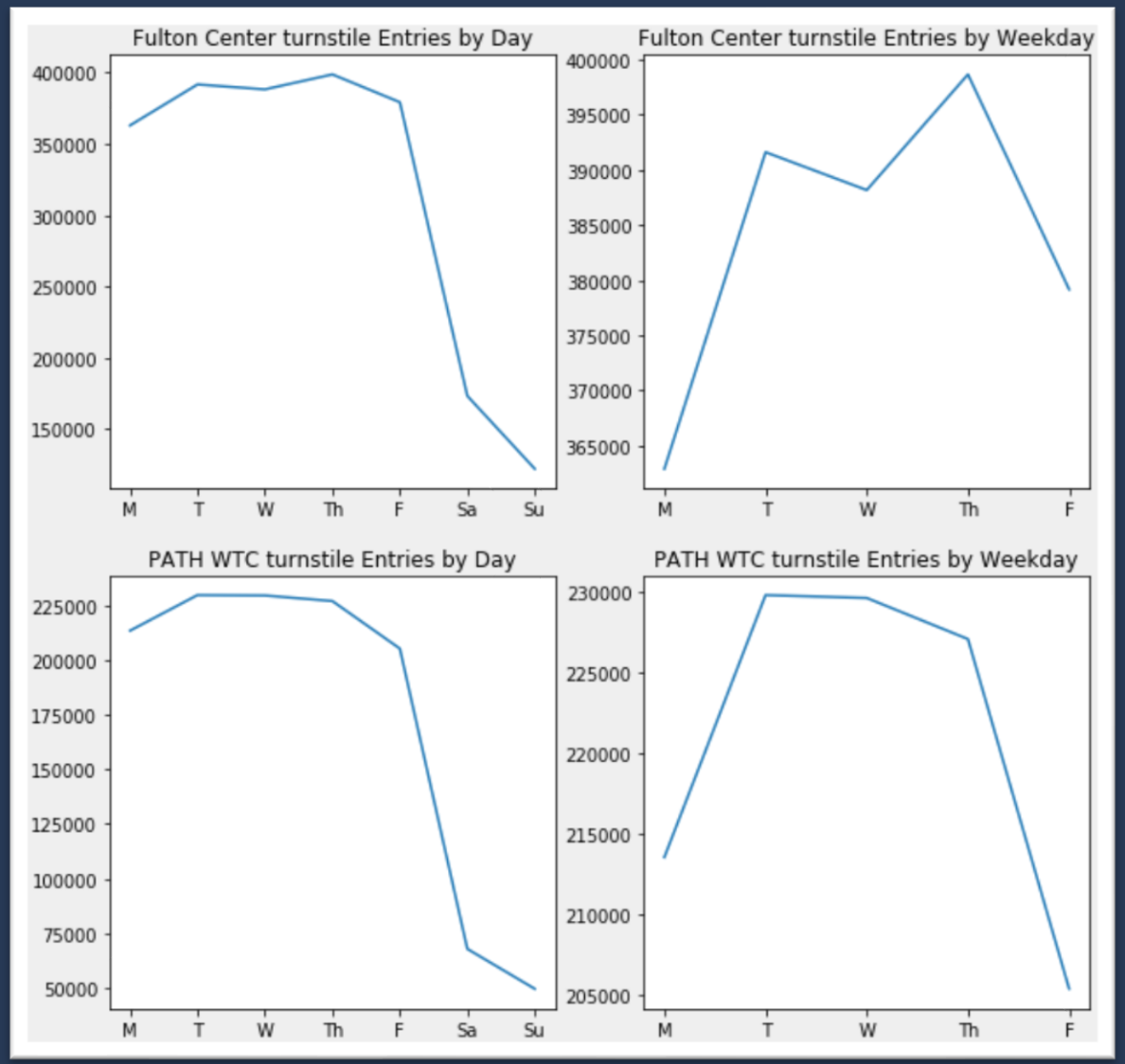


- Traffic peaks after 5pm for both stations
- We recommend:
  - ✓ Dividing the resources between the two stations
  - ✓ Deploying on Wednesday and Thursdays during the evening commute
  - ✓ We estimate we will reach
    - ✓ ~40k people / hour between 5-9pm in Union Square
    - ✓ ~60k people / hour between 6-8pm in Penn Station

ADDITIONAL RESOURCE CONSIDERATIONS

- Transportation Hub
  - ✓ Connects NJ Path,123, 456, and Brooklyn
  - ✓ Third highest foot trafiic overall, when combined
  - ✓ Set up table in occulus shopping center
- Fulton Center:
  - ✓ Donor percent = 33.7%, 2 tech companies
- WTC PATH:
  - ✓ Donor percent = 43.8%, zero tech companies





APPENDIX

MTA TURNSTILE DATA

- **2018 MTA Turnstile Data covered:**
  - ✓ Weeks ending April 7th, April 14th, April 21st and April 28th
  - ✓ Cumulative turnstile entries per day for each Control Area, Unit, SCP, Station
  - ✓ 372 total stations included in dataset
- **Data was cleaned to:**
  - ✓ Calculate incremental people entering each turnstile
  - ✓ Ensure a 24 hour period was captured on each day
  - ✓ Remove ‘Broad Channel’ station duplicate entry on April 4th (as indicated by the ‘Recovr Aud’ description)
  - ✓ Remove 5545 rows / 0.7% of dataset where turnstile counts indicated negative ‘incremental people’ on subsequent days
  - ✓ Remove 10 outliers where turnstile counters indicated over 10,000 people entering in four hour window

IRS DONOR DATA

Overview

- Individual Income Tax Statistics by zip code are publicly available on the IRS.gov website
- The available data includes selected income and tax items classified by State, Zip code, and AGI (adjusted gross income)
- The most recent year available is 2015
- The subset of data that was used in this analysis includes the following:
  - ✓ Zip code (ZIPCODE)
  - ✓ Total number of returns (N02650)
  - ✓ Total income amount (A02650)
  - ✓ Number of returns with contributions (N19700)
  - ✓ Contributions amount (A19700)
- This data is available for individuals who itemize on their federal tax returns (approximately 30% of all returns)
- The data URL is: https://www.irs.gov/pub/irs-soi/15zpallagi.csv
- The documentation URL is: https://www.irs.gov/pub/irs-soi/15zpdoc.doc

IRS DONOR DATA

Data Preparation

1. We used the MTA station zip code list, that we created in a separate process, to select the subset of the IRS donor data that we used for this analysis
2. We selected the subset of columns (zipcode, agi_stub, N02650, A02650, N19700, A19700) that we used for this analysis
3. We aggregated (sum) the subset of columns at the zip code level (collapsed 6 AGI levels)
4. We created two new columns (PCT_DONORS which is the number of returns with contributions divided by the total number of returns) and (PCT_INCOME which is the contribution amount divided by the total income)
    - PCT_DONORS tells us the percentage of individuals in each zip code who made charitable contributions
    - PCT_INCOME tells us the percentage of total income the charitable contributions repesented for individuals in each zip code

IRS DONOR DATA

Zip Code Summary

Zip Code	Percent Donors	Zip Code	Percent Donors	Zip Code	Percent Donors	Zip Code	Percent Donors	Zip Code	Percent Donors	Zip Code	Percent Donors
10001	36.5%	10026	24.8%	10306	43.0%	10470	28.9%	11216	19.4%	11368	11.1%
10002	16.1%	10027	21.6%	10307	48.9%	10471	46.7%	11217	37.5%	11372	19.5%
10003	47.2%	10028	51.8%	10308	48.6%	10472	12.0%	11218	23.3%	11373	12.5%
10004	50.2%	10029	14.7%	10309	50.6%	11101	25.6%	11219	11.3%	11374	28.3%
10005	43.8%	10030	16.4%	10312	49.2%	11102	20.6%	11220	7.4%	11375	40.8%
10006	41.2%	10031	15.1%	10451	14.4%	11103	19.6%	11221	15.4%	11377	17.6%
10007	60.4%	10032	14.0%	10452	10.4%	11104	22.6%	11222	23.7%	11379	36.6%
10009	26.0%	10033	16.7%	10453	9.8%	11105	24.1%	11223	20.0%	11385	20.5%
10010	49.0%	10034	16.5%	10454	8.5%	11106	21.6%	11224	18.2%	11414	43.0%
10011	52.7%	10035	17.2%	10455	10.4%	11201	46.7%	11225	21.3%	11415	32.6%
10012	41.1%	10036	35.4%	10456	9.7%	11204	16.9%	11226	18.6%	11417	25.8%
10013	38.8%	10037	23.4%	10457	9.9%	11205	24.4%	11228	28.4%	11418	21.3%
10014	51.6%	10038	33.7%	10458	10.7%	11206	12.5%	11229	26.5%	11419	19.0%
10016	45.2%	10039	18.0%	10459	11.6%	11207	16.8%	11230	23.3%	11421	21.3%
10017	46.5%	10040	16.3%	10460	11.4%	11208	15.4%	11231	37.2%	11432	21.9%
10018	35.5%	10044	31.8%	10461	26.0%	11209	32.1%	11232	12.8%	11433	22.8%
10019	42.6%	10065	54.0%	10462	20.7%	11210	30.7%	11233	19.6%	11435	22.0%
10021	57.0%	10075	55.2%	10463	28.8%	11211	22.1%	11235	24.7%	11691	20.7%
10022	56.5%	10128	47.9%	10466	22.9%	11212	16.3%	11236	30.2%	11692	22.4%
10023	56.5%	10301	33.3%	10467	16.0%	11213	17.8%	11237	10.7%	11693	31.2%
10024	54.1%	10304	30.3%	10468	12.0%	11214	17.2%	11238	31.6%	11694	43.1%
10025	39.8%	10305	36.3%	10469	27.4%	11215	41.2%	11354	14.3%		

TECHNOLOGY COMPANY DATA

Overview

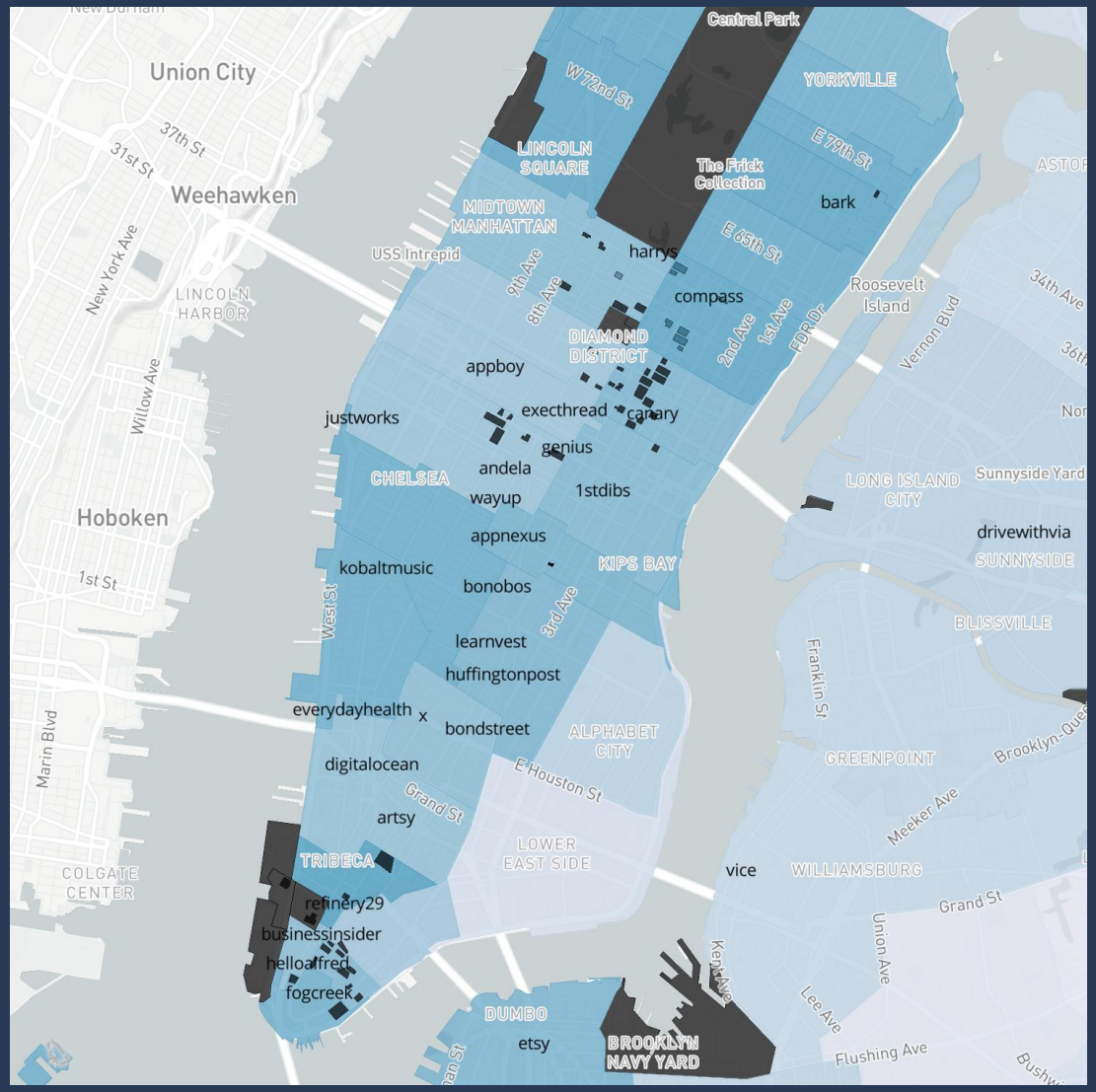
- Used BeautifulSoup to scrape company name information from The Hitchhiker's Guide to New York City Tech website
- The data URL is: http://startupguide.nyc/
- Used Google Maps Places to pull the address information which was parsed for the zip codes associated with each of the company's NYC location

TECHNOLOGY COMPANY DATA

Zip Code Summary

Zip Code	Company Count	Zip Code	Company Count
10001	6	10018	12
10002	1	10019	1
10003	8	10021	1
10004	3	10032	1
10006	2	10036	1
10007	3	10038	2
10010	16	10474	1
10011	5	11101	1
10012	10	11201	1
10013	7	11211	1
10014	5	11232	1
10016	4	11237	1
10017	3	11421	1

TECHNOLOGY COMPANY NAMES



MTA STATION NAMES