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WomenTechWomenYes : Summer Gala Fundraising Strategy


A project executed by Metis Consulting LLC

July 2019

Summary

- Street teams will collect emails to send out tickets for the gala.
- WTWY wants to target, identify and capture potential major donors



The background of the slide is a photograph of an airport security checkpoint area, featuring several metal detector lanes. The image is overlaid with a semi-transparent purple filter. White text is centered over the image, asking a question about donor targeting.

How do we target,
identify, and capture
potential major
donors?

Subway Stations

Identify high traffic stations (entries
and exits)

Days and times

Commuters

Working individuals

Work week only

Diminish the effect of tourists

Income

Focus on households >\$200k year

Alternative Data

Relative presence of tech hubs

Relative presence of Corporate
offices

KEY DATA SOURCES

MTA Turnstiles

Historical MTA turnstile data from June 2018 to June 2019

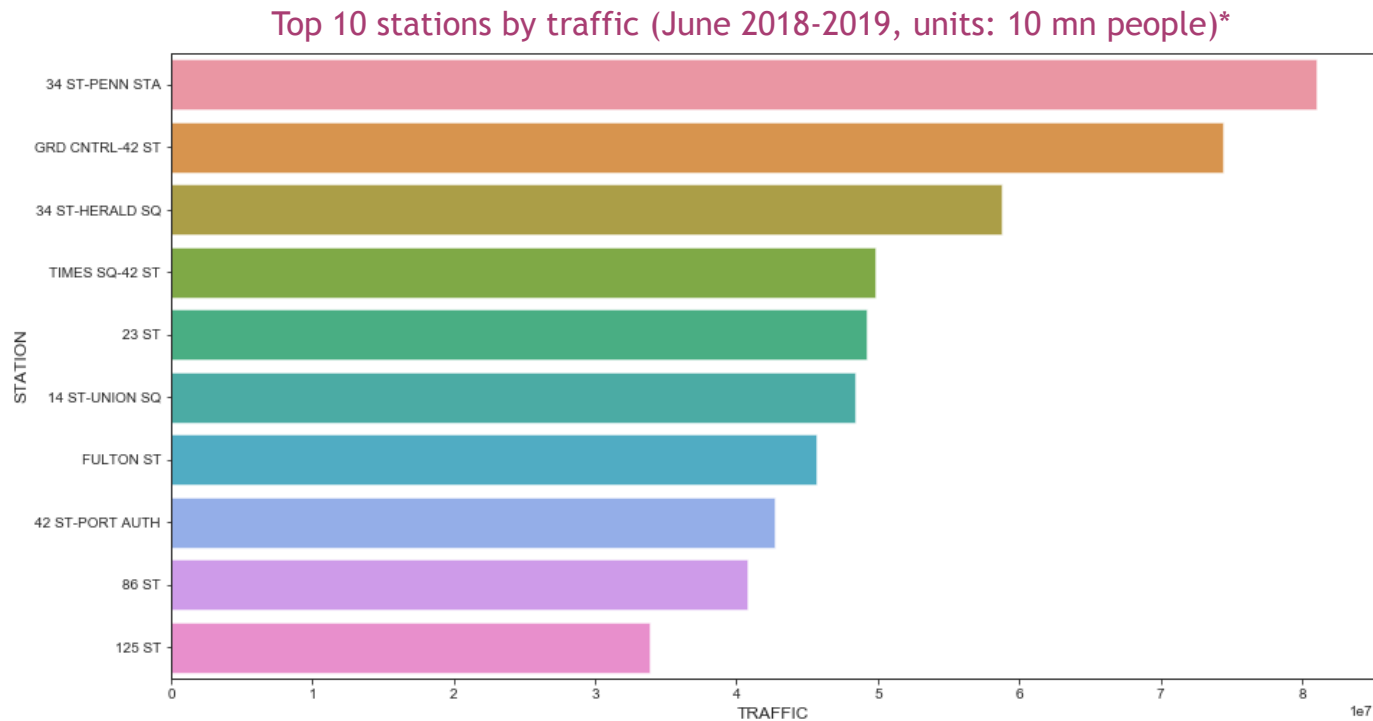
Google Maps API was used to pair stations with zip codes

American Community Survey (ACS)

Accessed ACS data from 2017 to identify zip codes with high:

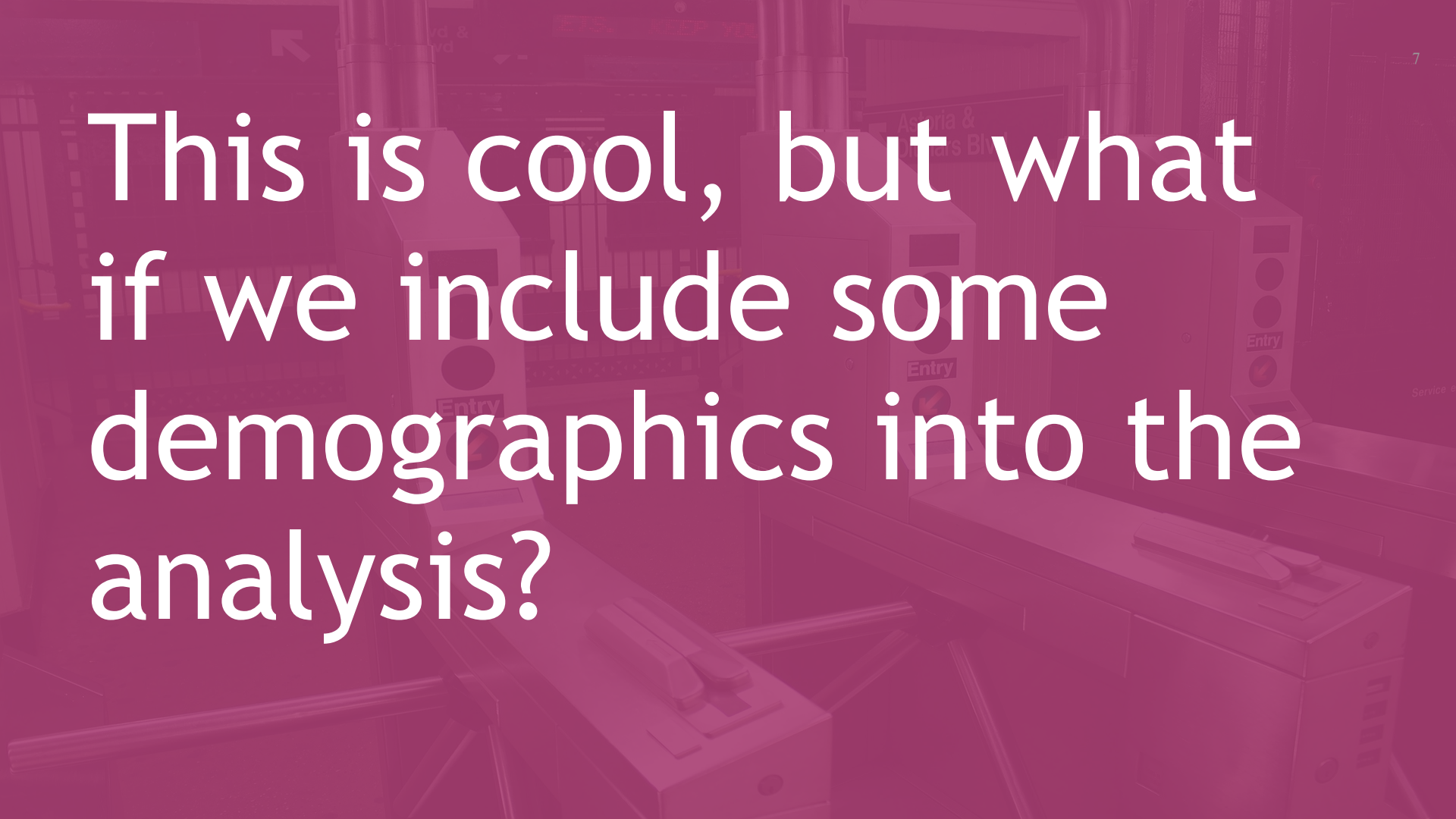
- Households commuting to work by public transportation
- Households with income > \$200k

Let's play first with the MTA Turnstiles data : Top 10 stations by traffic



Raw Data Source: Metropolitan Transportation Authority

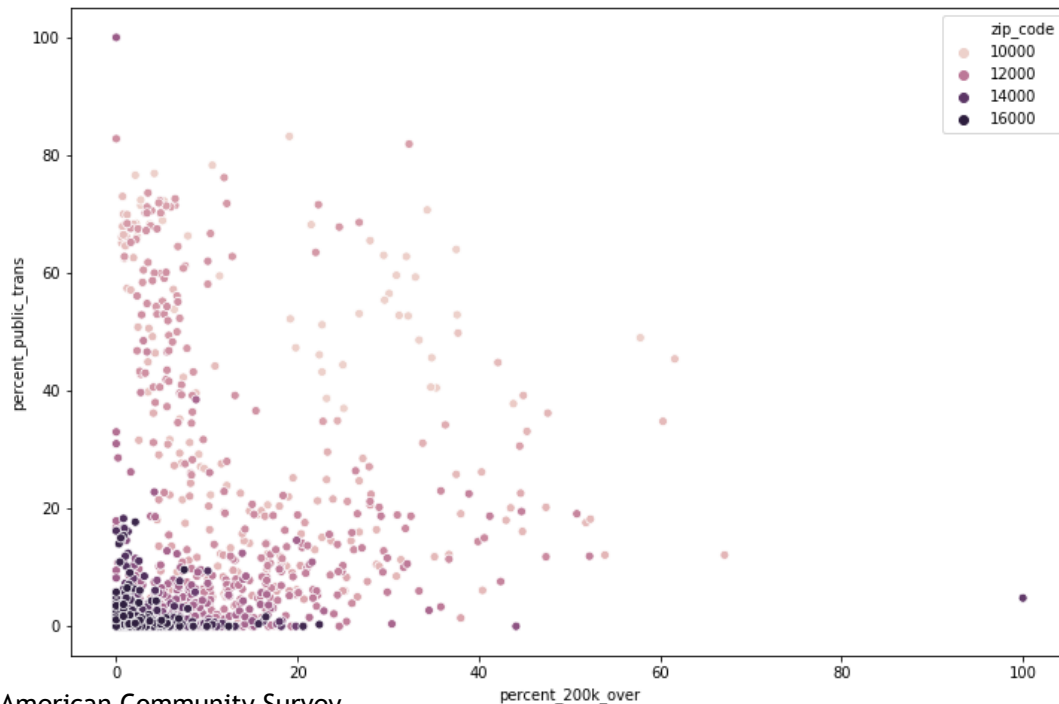
* Only including weekdays

The background image shows a retail store interior with various electronic equipment, including what appears to be a computer monitor and some specialized hardware. The entire image is covered with a semi-transparent purple overlay. The text is centered and reads:

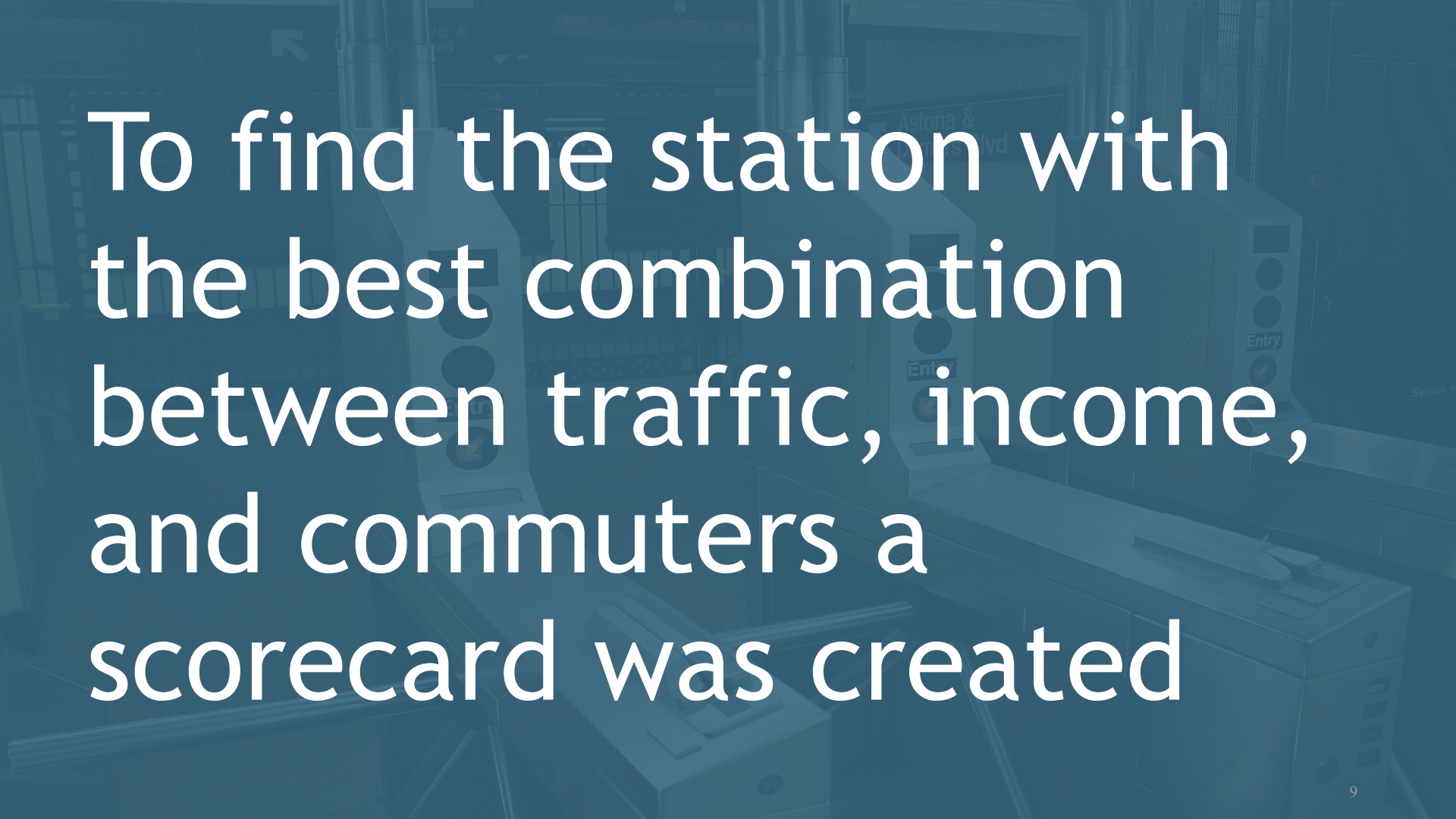
This is cool, but what
if we include some
demographics into the
analysis?

ACS Data: We want zip codes with high incomes and commuters by public transportation

Households with income >200 vs public transportation commuters for NYC zip codes (2017, units: %)



Raw Data Source: American Community Survey

The background of the slide is a blue-tinted photograph of a transit station. It shows several turnstiles with 'Entry' signs, and in the background, there are signs for 'Astoria & Clatsop Blvd' and 'Service'.

To find the station with
the best combination
between traffic, income,
and commuters a
scorecard was created

A point ranking system (scorecard) with different weights for the attributes was used to find the top 5 stations

More attractive ↑

STATION	SCORE	zip_code	TRAFFIC_RANK	PUBLIC_TRANS_RANK	200K_RANK
FULTON ST	68.2	11217.0	75	75	41
23 ST	67.2	10011.0	77	43	62
86 ST	66.6	10028.0	73	54	60
59 ST COLUMBUS	65.2	10023.0	71	49	64
14 ST-UNION SQ	63.2	10003.0	76	34	54

↓ Less attractive

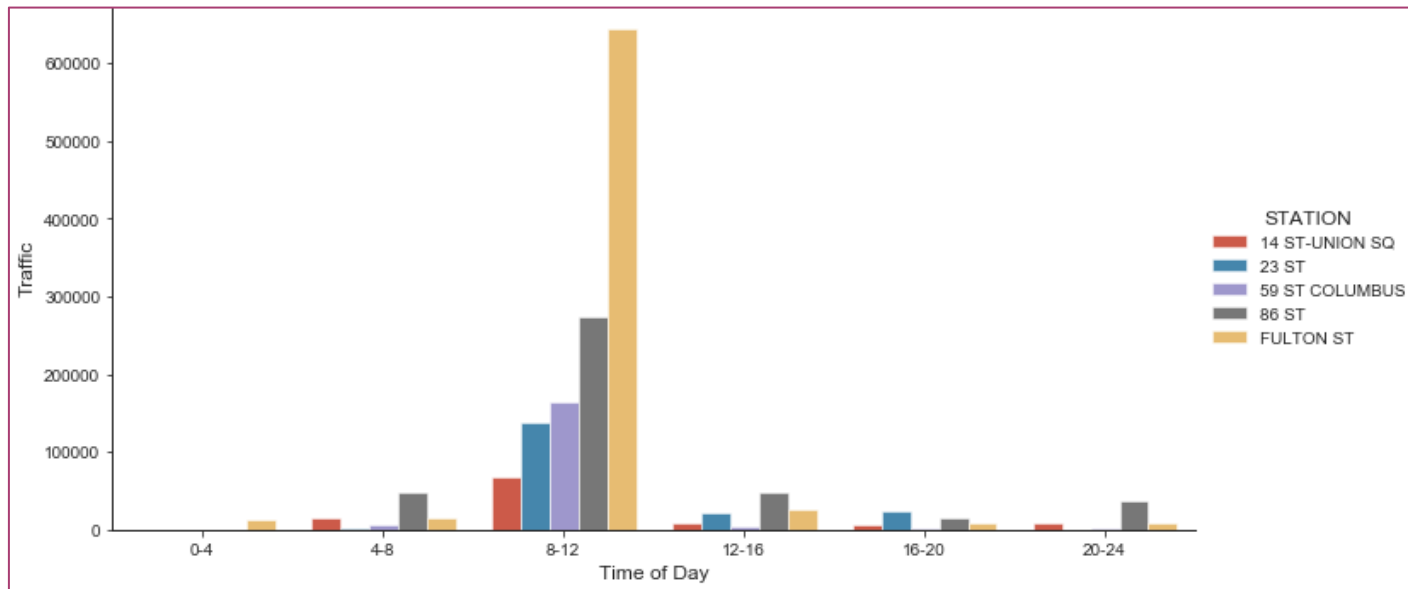
The higher the rank the better the station is positioned in comparison with others for every attribute

The score column is the weighted average of the ranks (points) for traffic, income and commute columns

Raw Data Source: Metropolitan Transportation Authority and American Community Survey

Now we have the top locations let's find the best time frames

Traffic by time of the day (June 2018-2019, units: people, 24-hour clock)*



Raw Data Source: Metropolitan Transportation Authority

*Excluding weekends

The top 5 stations have a favorable ratio of traffic, income and commuters



FULTON ST

10038

Large office
buildings and
shopping space

Top 10 in traffic

Top 10 in commuters

23 ST

10011

Large office
buildings, universities
and hospitals

Top 5 in traffic

High incomes

86 ST

10028

Wealthy
neighborhood

Top 10 in traffic

High incomes

59 ST COLUMBUS

10023

Large office buildings
and universities

Top 10 in traffic

High incomes

14 ST- UNION SQ

10003

Corporate offices
from large tech
(Google, FB, etc.)

Top 5 in traffic



Key Takeaways

1

The stations with the highest traffic have transfers to different lines

Stations such as the 23rd Street have connection to different MTA lines and also to buses, which guarantee a high traffic to capture emails

2

Time frames during commute periods are the best to increase reach

The morning period (8am -12pm) is the best time to capture emails, followed by the 12-8pm period

3

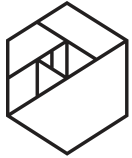
The expansion of data to cover multiple years could help to improve analysis

To reduce the effect of outliers and special events

4

Expanding street teams outside subway stations can improve target accuracy

Not everybody commute to work using the train, adding street teams outside train stations in trendy neighborhoods could increase reach



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Duc Vu

<https://github.com/dvu4>

Elvis Davalillo

<https://github.com/elvisdavalillo>

Farhan Syed

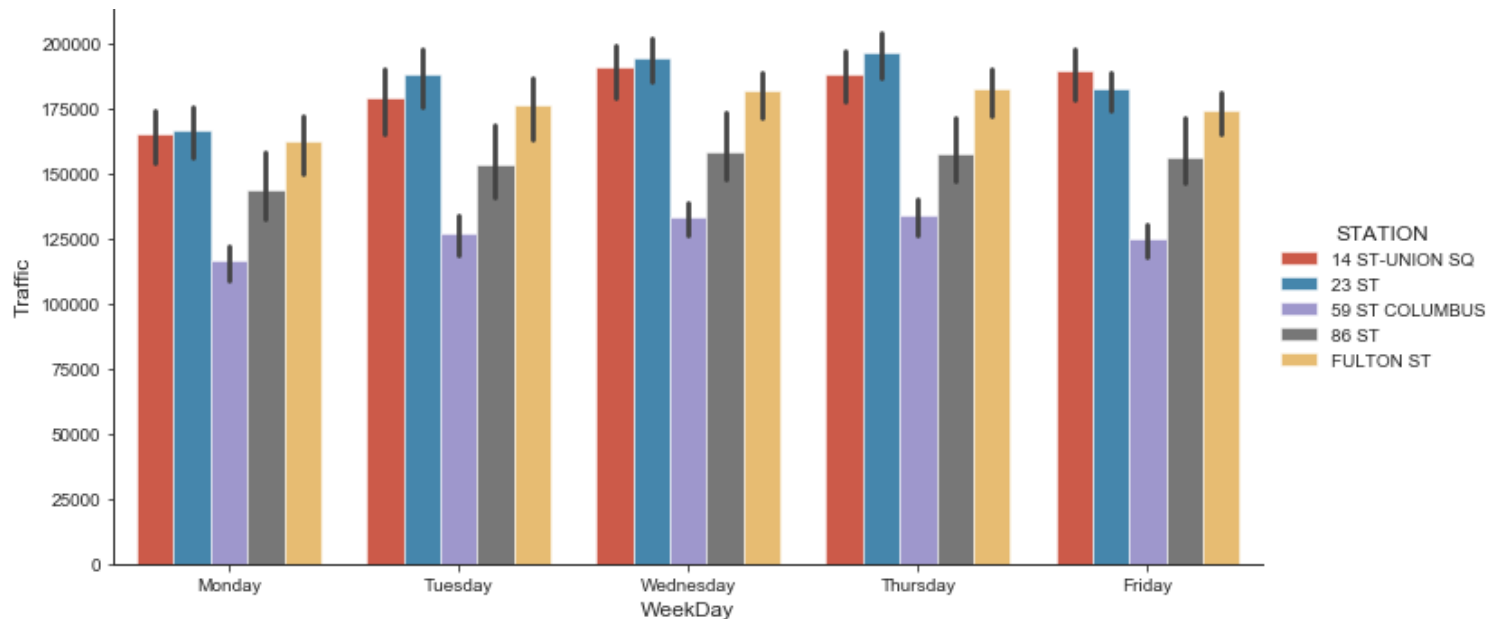
<https://github.com/farsyd>

Background
Data Wrangling
EDA
Recommendations
Key Takeaways
Appendix



Wednesdays and Thursdays tend to have a slightly higher traffic than the rest of the days

Traffic by weekday for top 5 stations (June 2018-2019, units: people, weekday)*



Raw Data Source: Metropolitan Transportation Authority

*Excluding weekends

Inconsistent turnstile data

Replace negative entries
and exits rates with zero.

Label differences in total
traffic greater than 80,000
per turnstile per day.

Missing zip codes

Modified existing code for
Google Maps API

Searched using station
names from turnstile data

Null values

Missing commuter data
was assumed to be zero

Rows with missing incomes
were removed from the
survey data