Optimizing Street Team Placement

WomenTechWomenYes

The Team

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Project Objective:

Optimize the Placement Of Street–Teams

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WTWY Fills Gala Space!

Overview

By exploring the MTA subway data, we aim to discover which subway stations are most optimal for WTWY to utilize for their promotional activities.

We aim to help the WTWY:

- Increase reach and awareness
- Generate more fundraising income
- Fill gala event space

Data Sources

Several Datasets were used for this analysis:

- Publicly available **MTA data** between April 27 and June 21, 2019.
- Publicly available **NYC housing sales data** within 2017.
- Female-to-male ratio data from the **2010 US Census**.

Optimal Placement Strategy

1. Locate Top Stations

This will be the overall TOP 10 subway stations that have the highest average foot traffic for the teams to patrol.
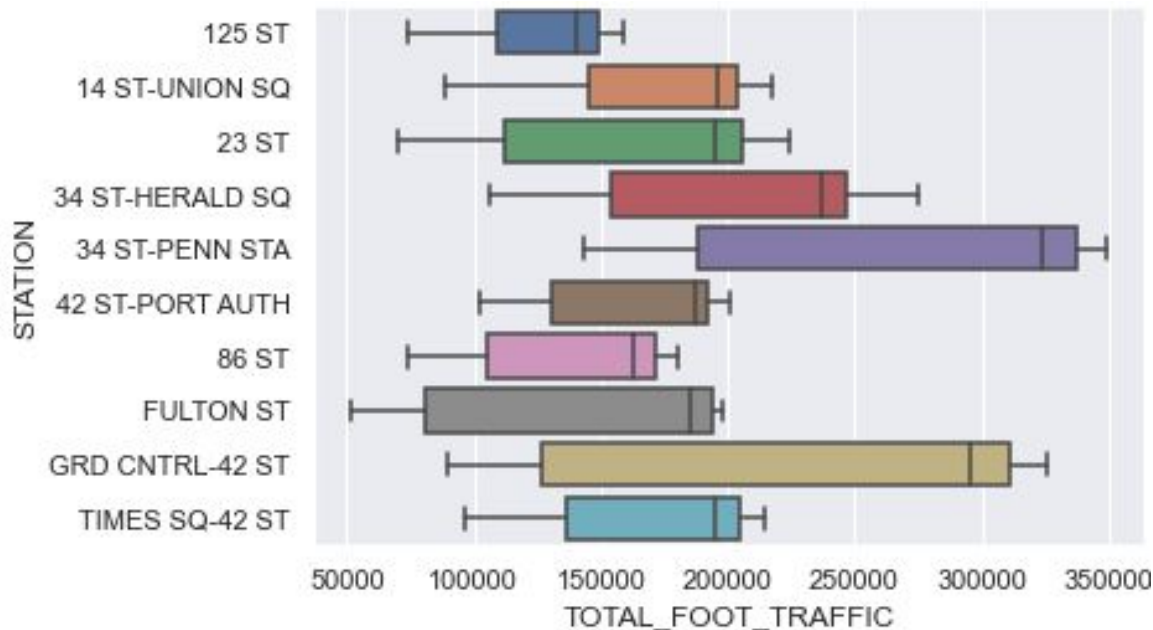
2. Days of Week Analysis

What is the optimal day or days of the week where foot traffic is highest?

3. Supplemental Information

Wealth and percentage of females in an area can be additional targeting factors.

1. Locate Top Stations

1. 34 ST-PENN STA
2. GRD CNTRL- 42 ST
3. 34 ST-HERALD SQ
4. TIMES SQ-42 ST
5. 14 ST-UNION SQ
6. 23 ST
7. 42 ST-PORT AUTH
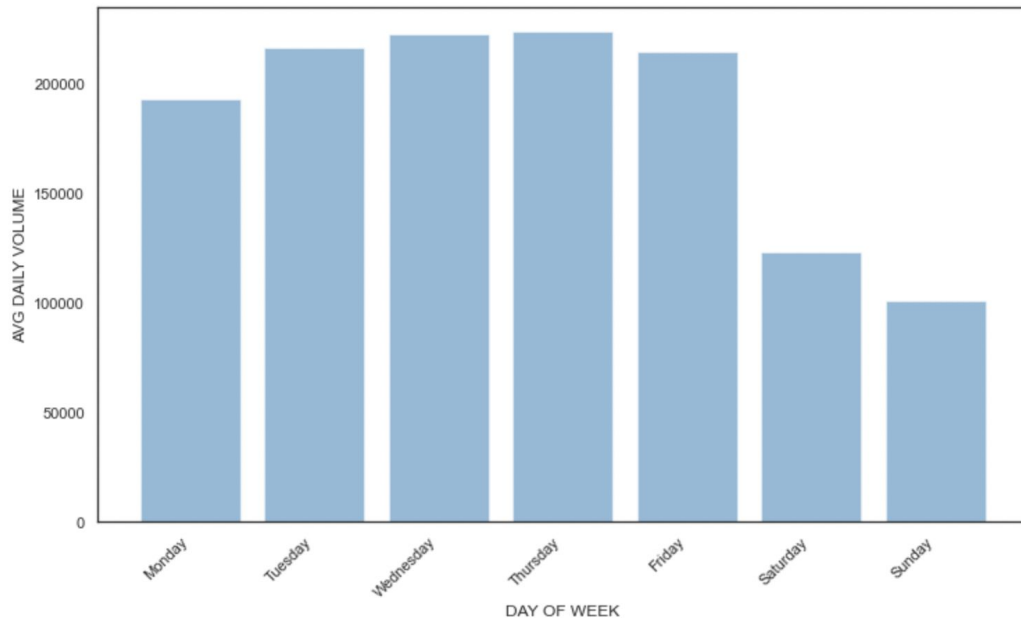8. FULTON ST
9. 86 ST
10. 125 ST

2. Days of Week Analysis

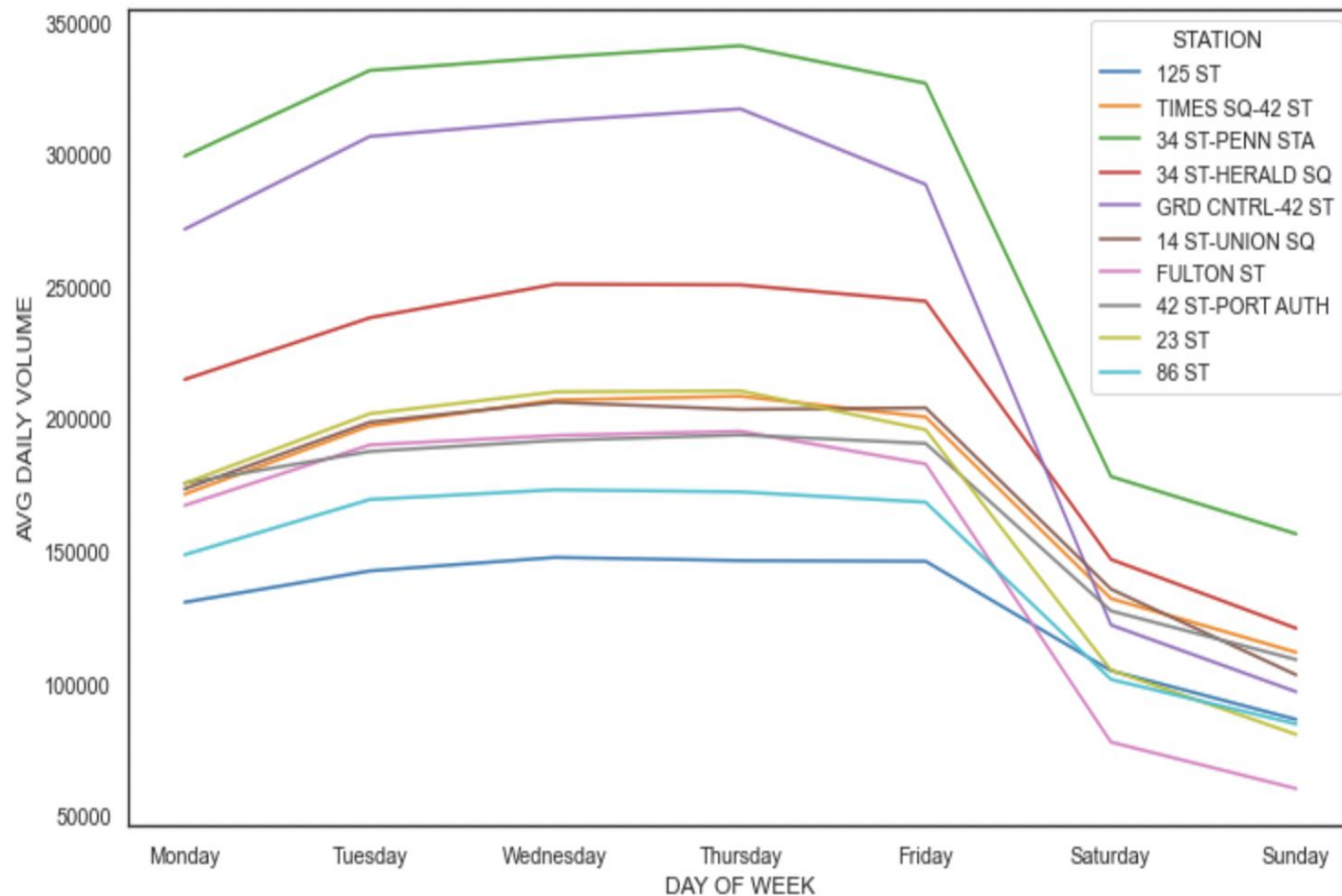## Findings from Top 10 Subway Stations By Day of Week

We found the busiest days of the week, with the largest average amount of daily volume are:

Highest to Lowest:
- Thursday
- Wednesday
- Tuesday
- Friday

3. Supplemental Info

Additional layers of data were added for **Female/Male Ratio** and **Median Housing prices**.

- Higher wealth households to be more likely to donate
- Areas with more females more likely to support WTWY

Station	Average Daily Traffic	Female/Male Ratio	Median House Prices
34 ST-PENN STA	281,539.07	-	-
GRD CNTRL-42 ST	245,196.07	-	-
34 ST-HERALD SQ	209,646.02	0.98	1,007,500.00
TIMES SQ-42 ST	175,694.62	0.74	1,175,000.00
14 ST-UNION SQ	175,128.36	1.06	1,225,000.00
23 ST	168,679.93	1.06	1,433,727.75
42 ST-PORT AUTH	168,149.46	-	-
FULTON ST	152,617.16	1.14	901,216.67
86 ST	145,609.79	1.13	778,750.00
125 ST	129,362.48	1.09	846,666.67

Analysis Summary

Trend 1: Station

There are particular stations that are busier than others

Client Relevance:
- WTWY has the best chance of reaching out to potential Gala-Goers if their patrol teams target higher traffic locations

Trend 2: Day of Week

Foot traffic is heavier on particular days of the week

Client Relevance:
- WTWY can optimize their effort if they have teams out between Tuesday through Thursday

Trend 3: Wealth and Gender

There are particular, personal attributes to target when optimizing street-team placement

Client Relevance:
- Potential Gala-Goers or Donors of WTWY are more likely to be of these SES and gender -- based on general company description

Score Chart

STATION	Rank	Traffic	Median House Price	Women to Men Ratio	Score
34 ST-PENN STATION	1	<u>10</u>	4	1.03	41.2
GRAND CENTRAL-42 ST	2	8	4	1.03	32.96
23 ST	3	4	<u>7</u>	1.06	29.68
14 ST-UNION SQ	4	4	6	1.06	25.44
34 ST-HERALD SQ	5	6	4	0.98	23.52
42 ST-PORT AUTHORITY	6	4	4	1.03	16.48
TIMES SQ-42 ST	7	4	5	0.74	14.8
FULTON ST	8	4	3	<u>1.14</u>	13.68
86 ST	9	4	1	1.13	4.52
125 ST	10	2	2	1.09	4.36

Project outcome:

We believe WTWY will fill their gala if they optimize marketing at:

#1 Station: 34 ST–PENN STA
Score: 41.2
#1 Day: Thursday

Next Steps

Opportunities for Future Work

- Use outcome data to optimize towards better performing stations
- Get information from WTWY about the demographics of their members and donors
- Layer on additional datasets such as distance to tech companies or relevant demographics