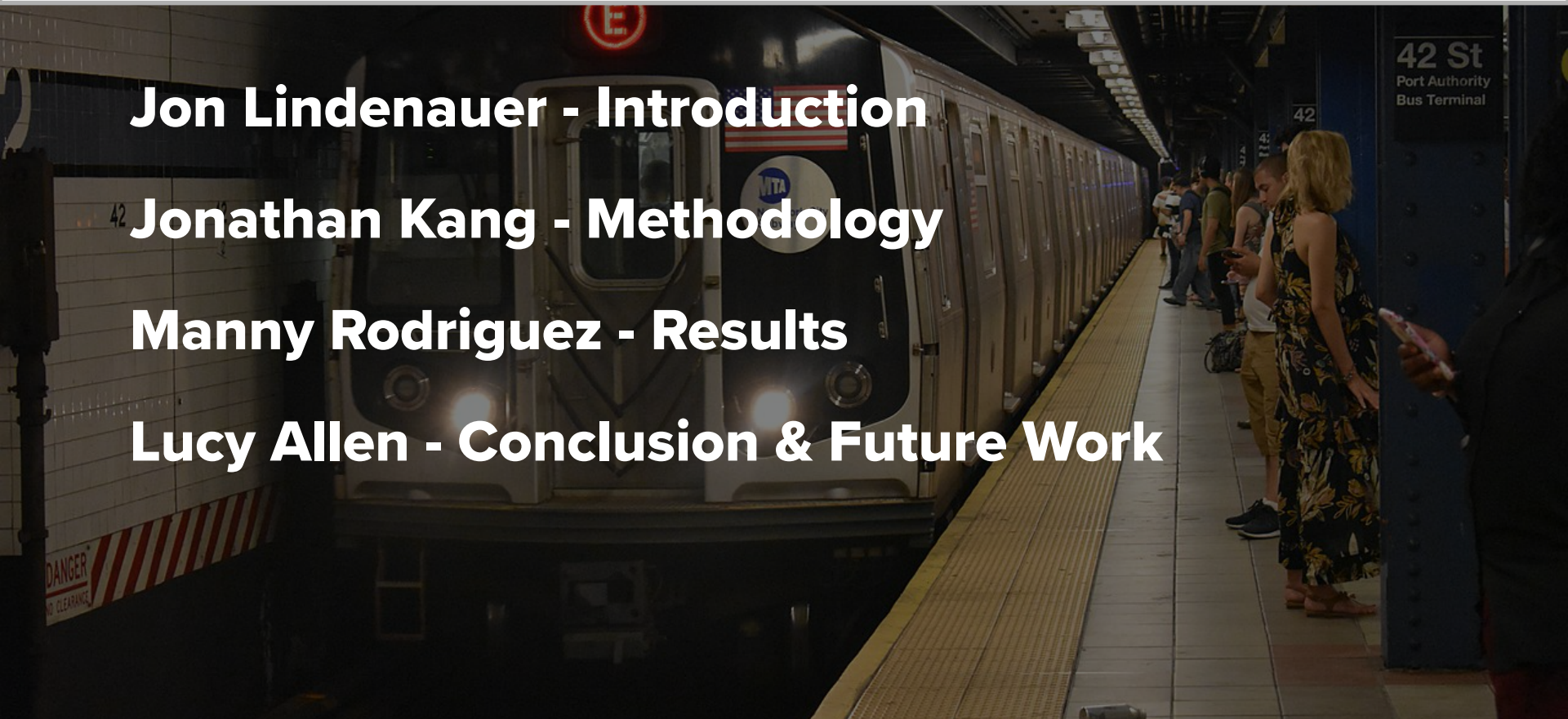
WomenTechWomenYes International: Street Team Strategy

Date Science Team



Jon Lindenauer - Introduction

Jonathan Kang - Methodology

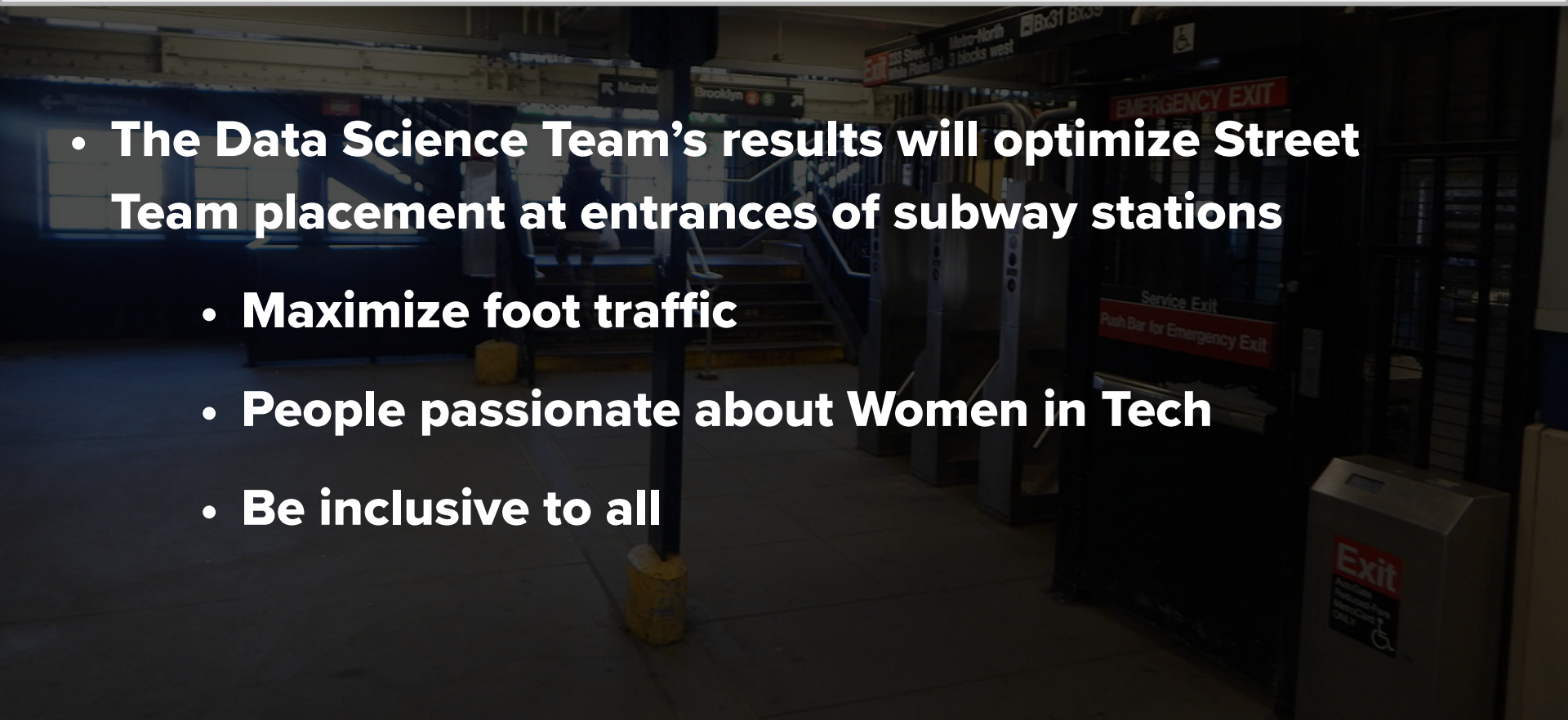
Manny Rodriguez - Results

Lucy Allen - Conclusion & Future Work

Introduction

- The WomenTechWomenYes International
    - New organization
    - Annual summer gala fundraiser
- The WTWY Street Team
    - Gives away free gala tickets
    - Placement is key to success

Introduction



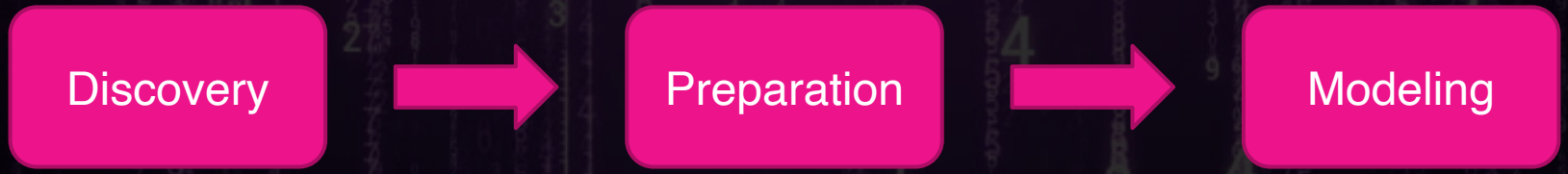
- The Data Science Team's results will optimize Street Team placement at entrances of subway stations
    - Maximize foot traffic
    - People passionate about Women in Tech
    - Be inclusive to all

Methodology

Major data sources supporting the analysis:

- **MTA Turnstile Data**
- **Census Bureau Data**
- **Google Maps Location Data**

Methodology



Data gathering based approach

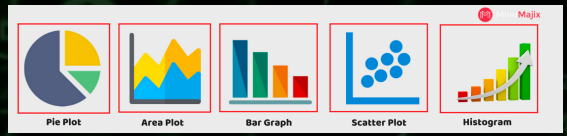
Data cleaning and conversion

Data relationships

Methodology

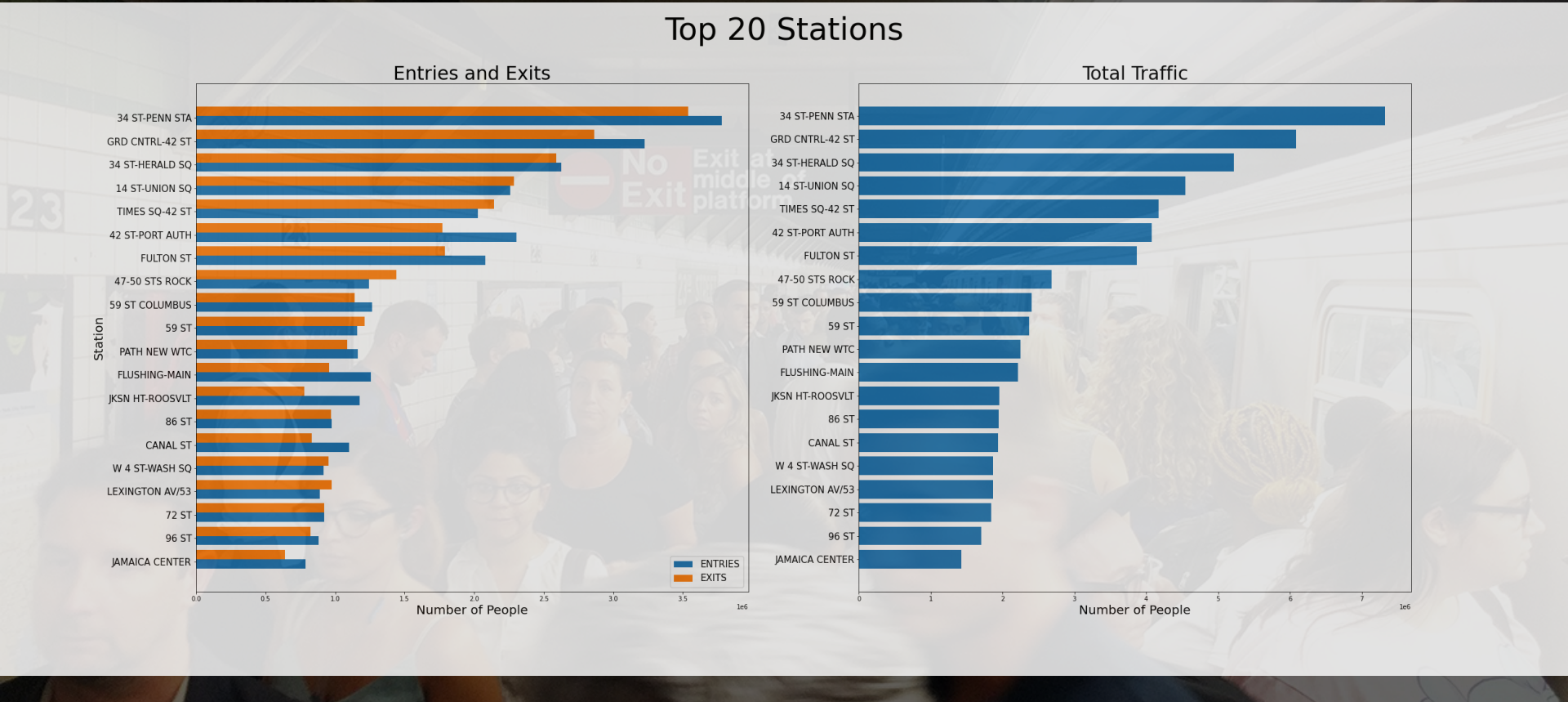
Major data sources supporting the analysis:

- **Jupyter Notebook**
- **Pandas**
- **Matplotlib**



Results and Conclusions

Results


Top 20 Stations
Entries and Exits
34 ST-PENN STA
GRD CNTRL-42 ST
34 ST-HERALD SQ
14 ST-UNION SQ
TIMES SQ-42 ST
42 ST-PORT AUTH
FULTON ST
47-50 STS ROCK
59 ST COLUMBUS
59 ST
PATH NEW WTC
FLUSHING-MAIN
JKSN HT-ROOSVLT
86 ST
CANAL ST
W 4 ST-WASH SQ
LEXINGTON AV/53
72 ST
96 ST
JAMAICA CENTER
Station
ENTRIES
EXITS
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
1e6
Number of People
Total Traffic
34 ST-PENN STA
GRD CNTRL-42 ST
34 ST-HERALD SQ
14 ST-UNION SQ
TIMES SQ-42 ST
42 ST-PORT AUTH
FULTON ST
47-50 STS ROCK
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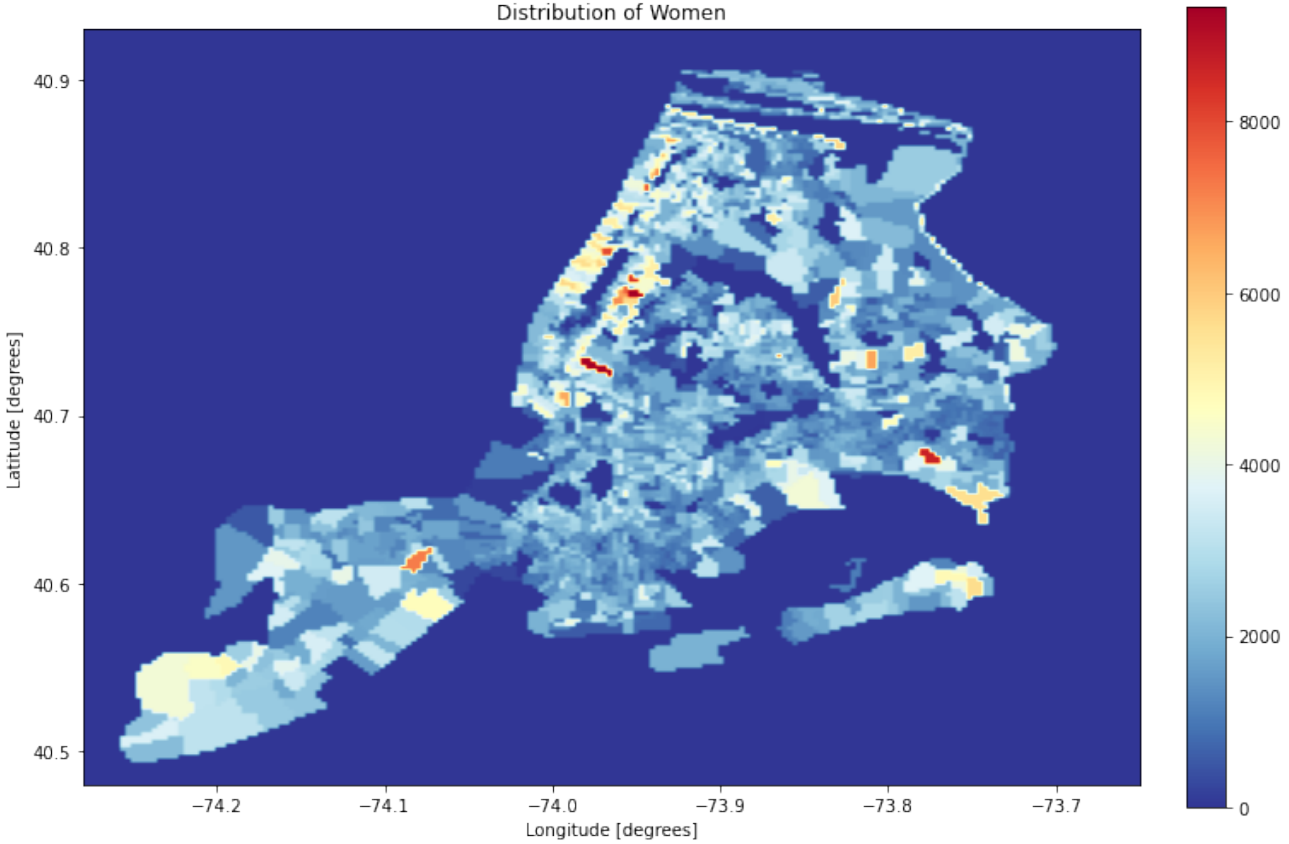
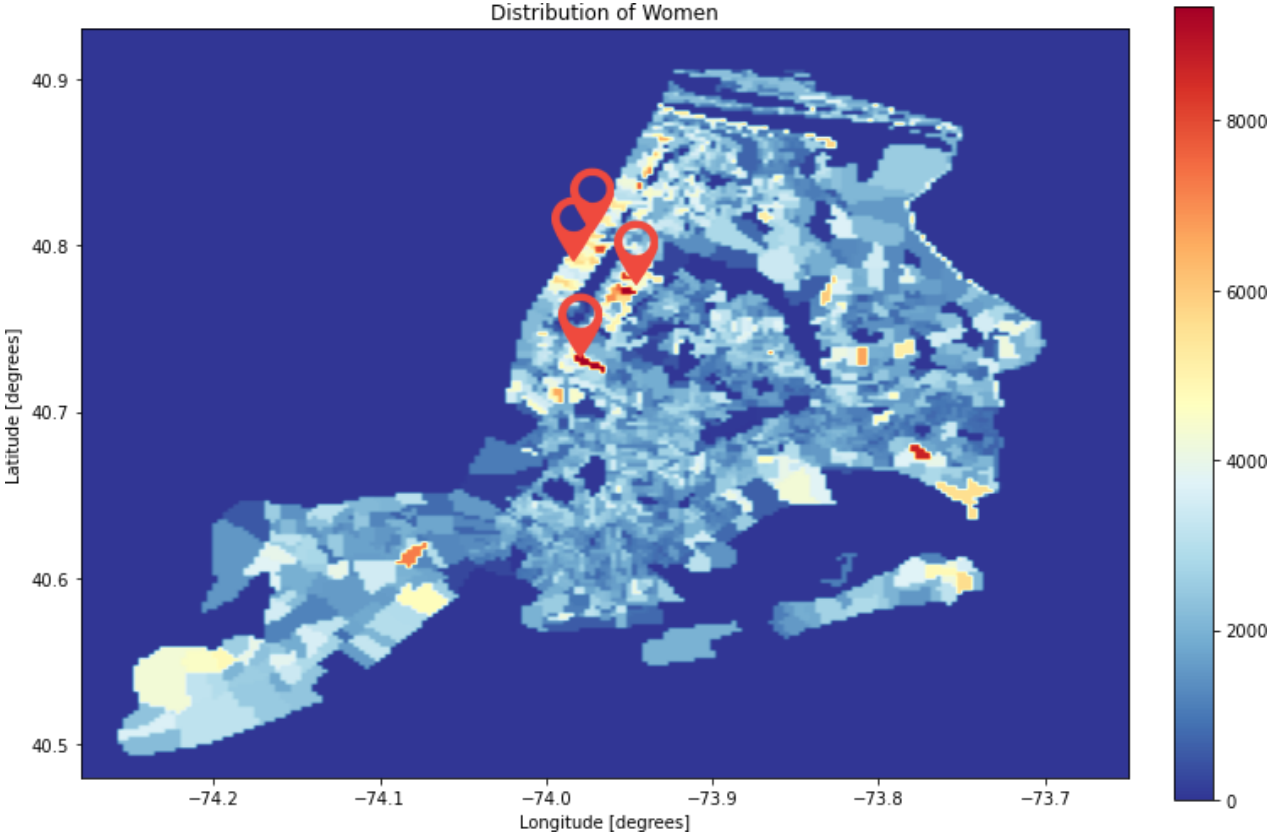
FLUSHING-MAIN
JKSN HT-ROOSVLT
86 ST
CANAL ST
W 4 ST-WASH SQ
LEXINGTON AV/53
72 ST
96 ST
JAMAICA CENTER
0
1
2
3
4
5
6
7
1e6
Number of People

Results


Distribution of Women
40.9
40.8
40.7
40.6
40.5
Latitude [degrees]
−74.2
−74.1
−74.0
−73.9
−73.8
−73.7
Longitude [degrees]
8000
6000
4000
2000
0

Results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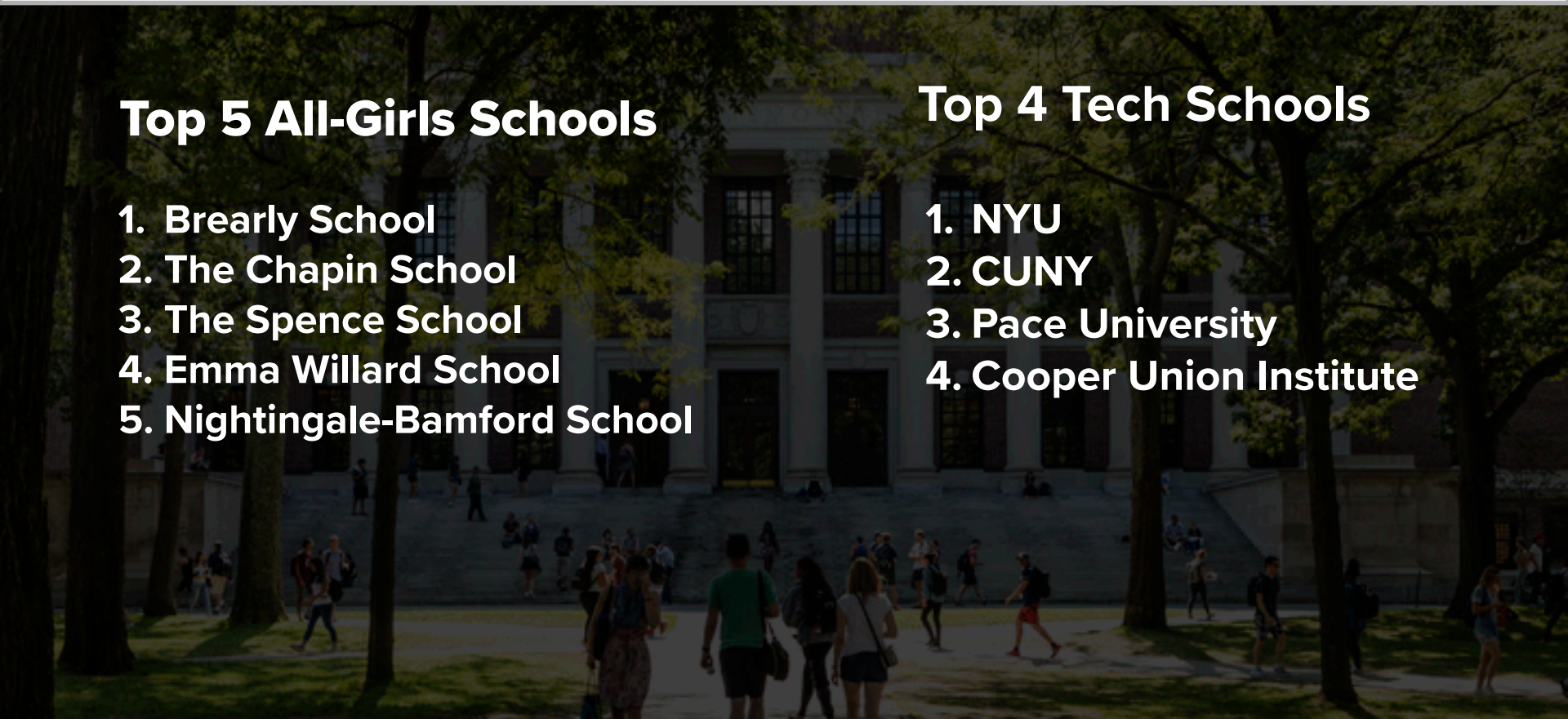
Results



Top 5 All-Girls Schools

1. Brearly School
2. The Chapin School
3. The Spence School
4. Emma Willard School
5. Nightingale-Bamford School

Top 4 Tech Schools

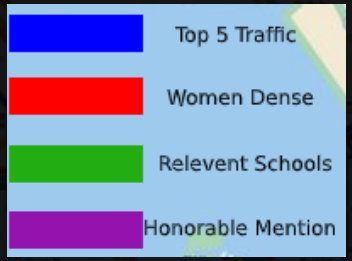
1. NYU
2. CUNY
3. Pace University
4. Cooper Union Institute

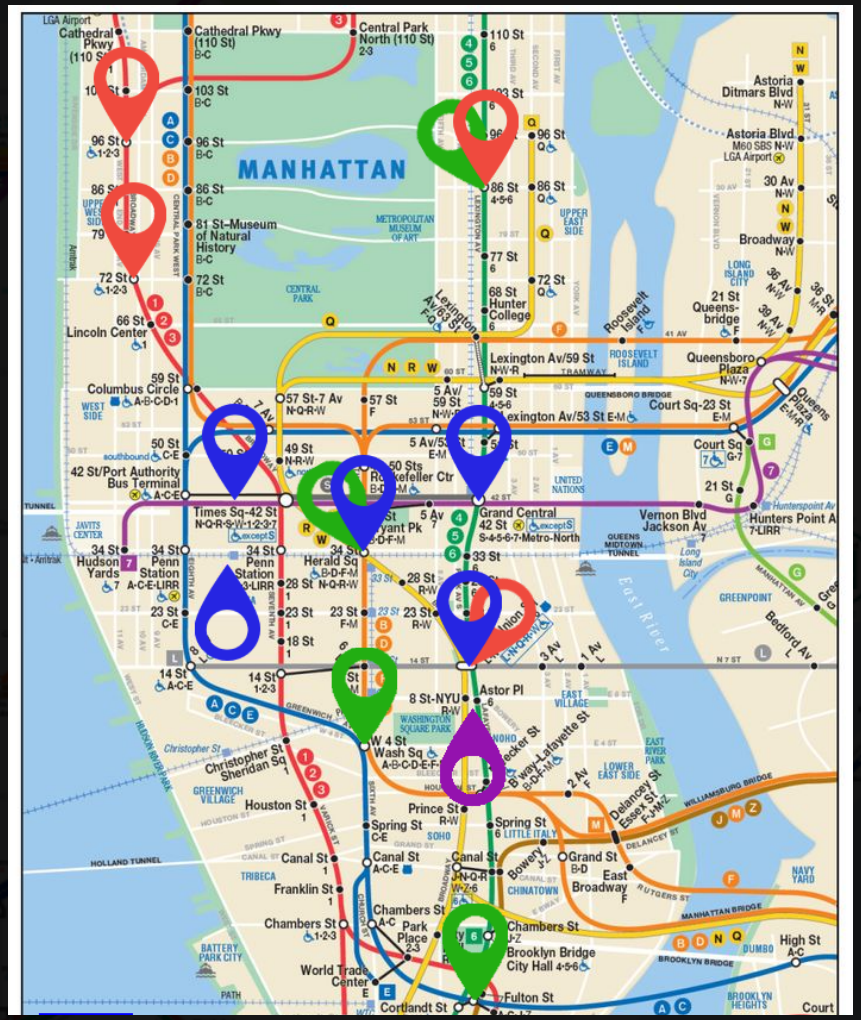
Conclusions

- 42nd St Times Square and Port Authority
- St Penn Station
- Grand Central Station

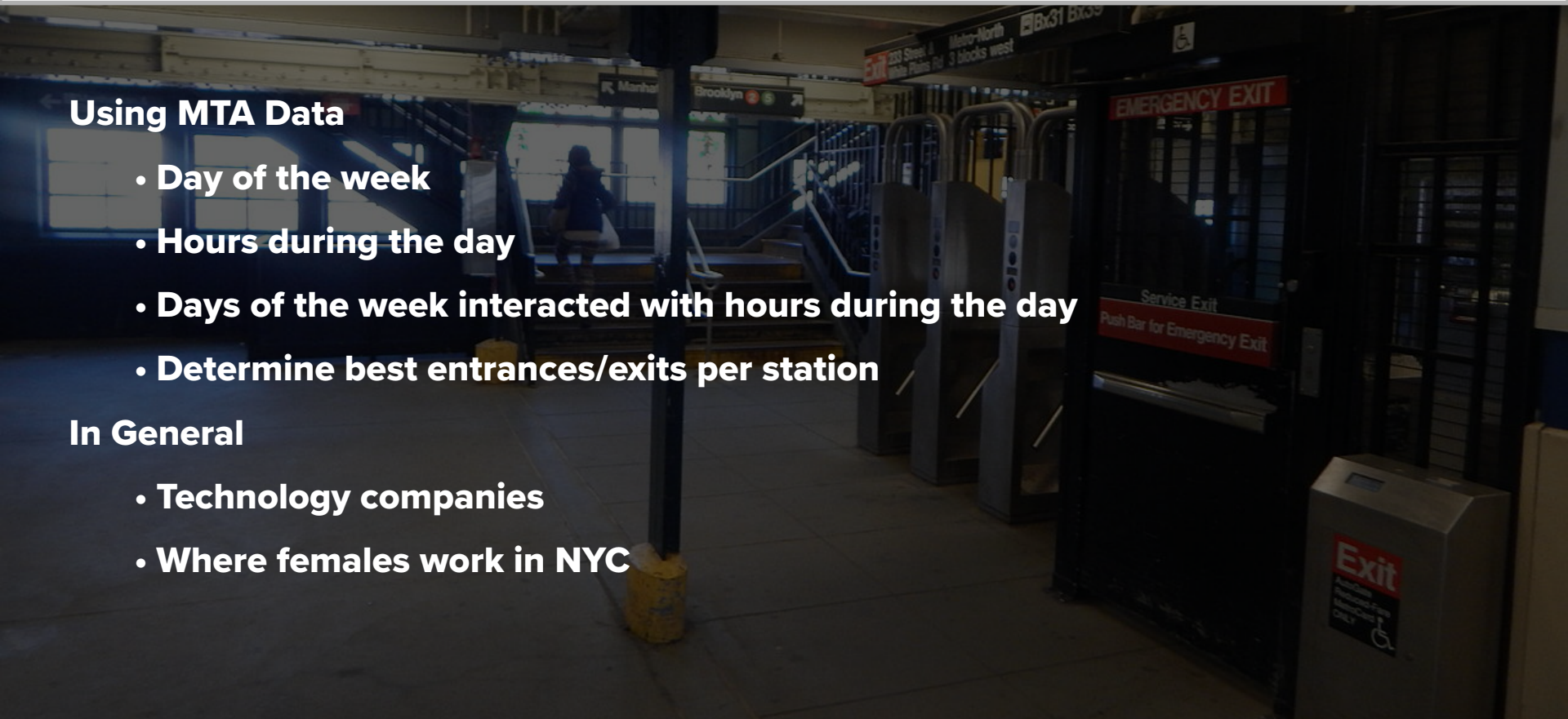
- 14th St Union Square
- 86th St
- 96th St
- 72nd St

- 34th St Herald Square
- Fulton St
- W 4th St Washington Square





Future Work



Using MTA Data

- Day of the week
- Hours during the day
- Days of the week interacted with hours during the day
- Determine best entrances/exits per station

In General

- Technology companies
- Where females work in NYC

Appendix

Acknowledgements:

By MTAEnthusiast10 - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=87661351

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By MagicL55 - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=86283970

By Adam Moss from Highland Park, NJ, United States - 233rd Street Station, CC BY-SA 2.0, https://commons.wikimedia.org/w/index.php?curid=39822252

www.shutterfly.com

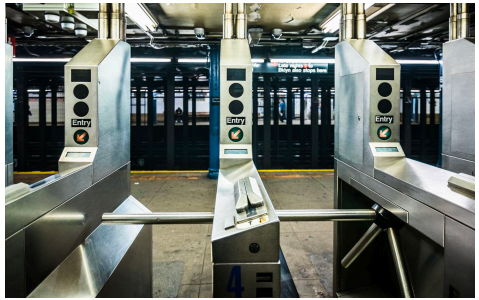
www.kaggle.com

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

Niche website for information on schools
https://www.niche.com/colleges/search/best-colleges-for-information-technology/s/new-york/
https://www.niche.com/k12/search/best-all-girls-high-schools/s/new-york/

Appendix

To determine key metrics for evaluating curated data



- MTA Turnstile Data
  - Max minus Min on ENTRIES and EXITS
    - Combined to determine total traffic
  - Total Traffic data based on Station and Line Name
    - Can be evaluated based on any set of given attributes
      - Station
      - Line
      - SCP
      - Date…
- Census Bureau Data
  - Translate Census Tract information to Latitude and Longitude
  - Total density and scale information can be extracted via distribution
  - Census demographic data can be evaluated based on a number of given characteristics
    - Gender
    - Race
    - Income
    - Job Category
    - Mode of Transit …
- Google Map Data
  - Supplemental information:
    - Pin point location for major school
    - Pin point location for major