Project Benson

Team 1

- Daniel Licht
- Oren Tevet
- Sukeerthi Varadarajan
- Hamish Woodrow
- Jin Zhang

Business case

A pop-up food truck company (“The Food Truck Mafia”) is expanding from the San Francisco Bay to New York City, and wants to identify the top locations nearby subway stations to place their food trucks to maximize sales revenue.

They request a list of candidate stations as well as any additional information which could help their business plans.

Assumption: Subway riders are much more likely to purchase food from a food truck after riding the subway than before.

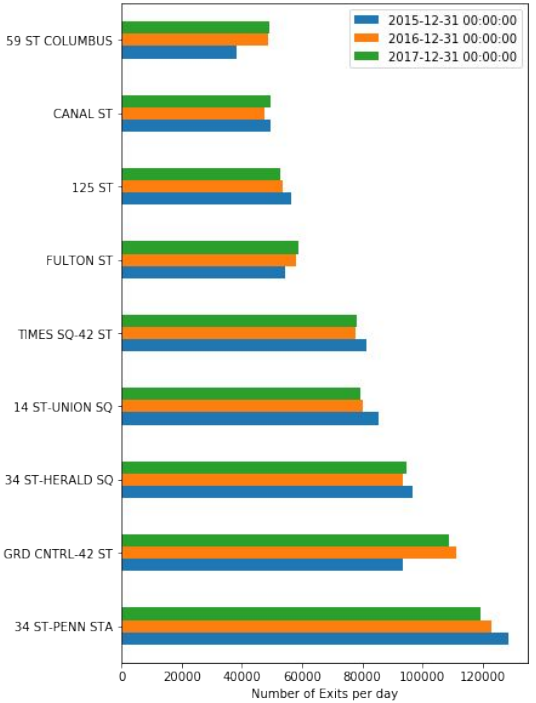
Therefore, we will be focusing on subway exit data.

Data scraping

Data Source: MTA open turnstile data

Two periods:

- June 2016 - June 2017
- 2015-01 - Present day



Primary analysis on year to date analysis (smaller dataset), trends matched with year to year data.

Data back to 2015 pulled and compared over a year-to-year basis (different scraping and pulling methods).

Data cleaning

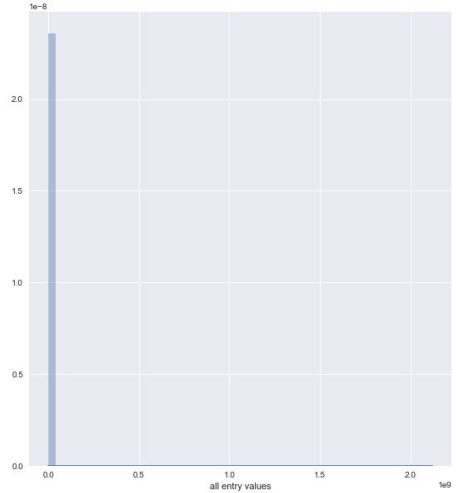
Date type (string → timedate)

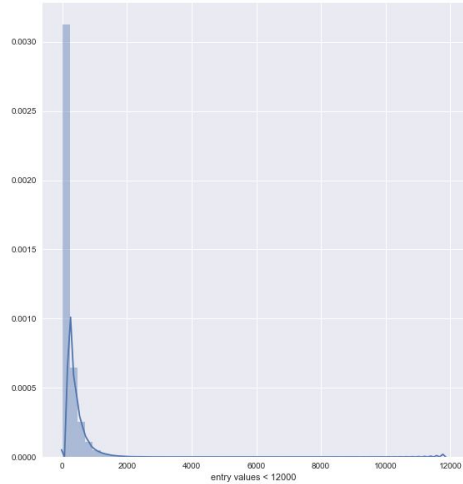
Cumulative numbers → actual numbers between auditions

Outliers - set negative numbers and numbers larger than 8000 to null

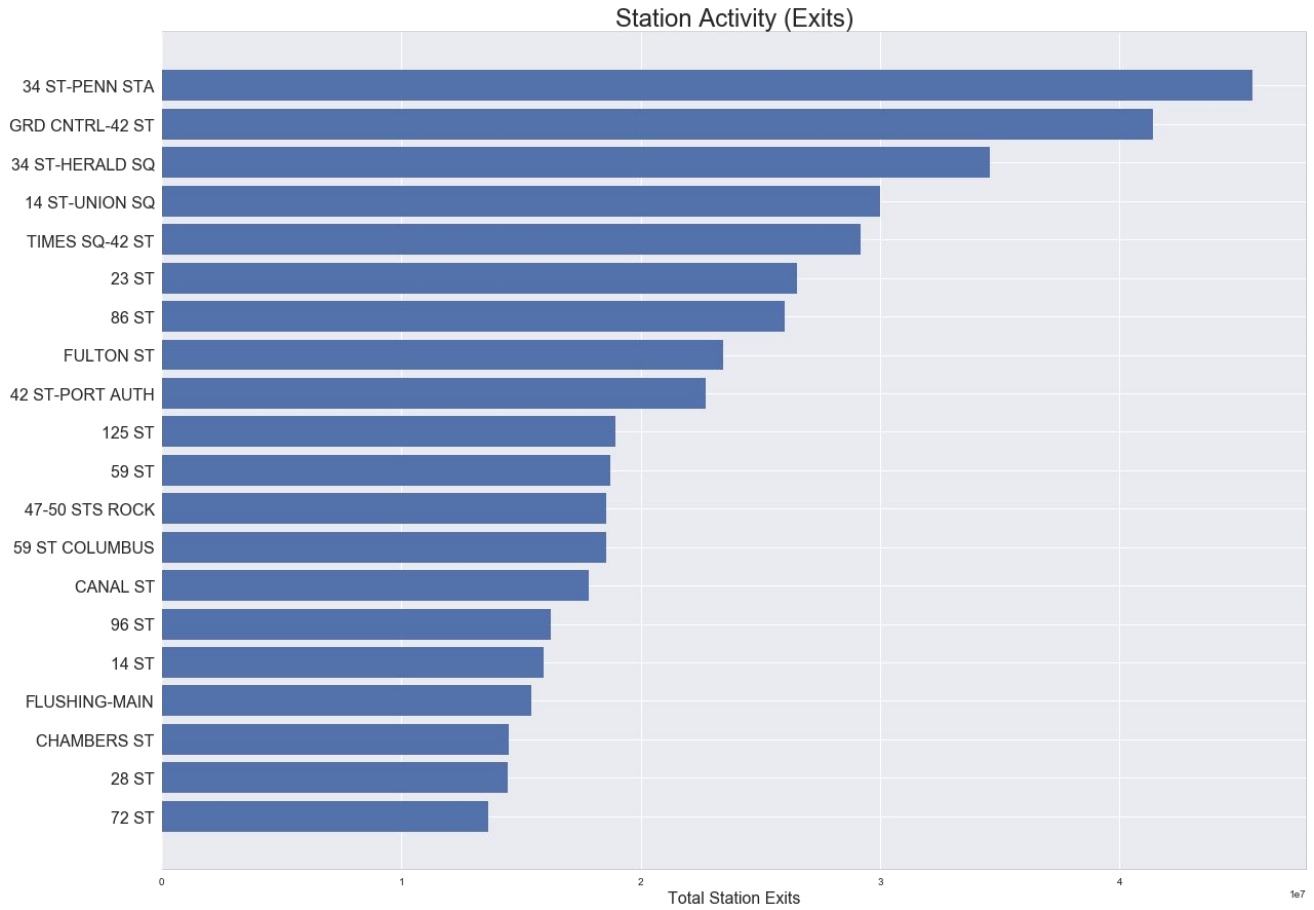
percentage of negative entries: 0.008%
percentage of zero entries: 0.142%
percentage of negative exits: 0.006%
percentage of zero entries: 0.140%

Focus on relevant parameters

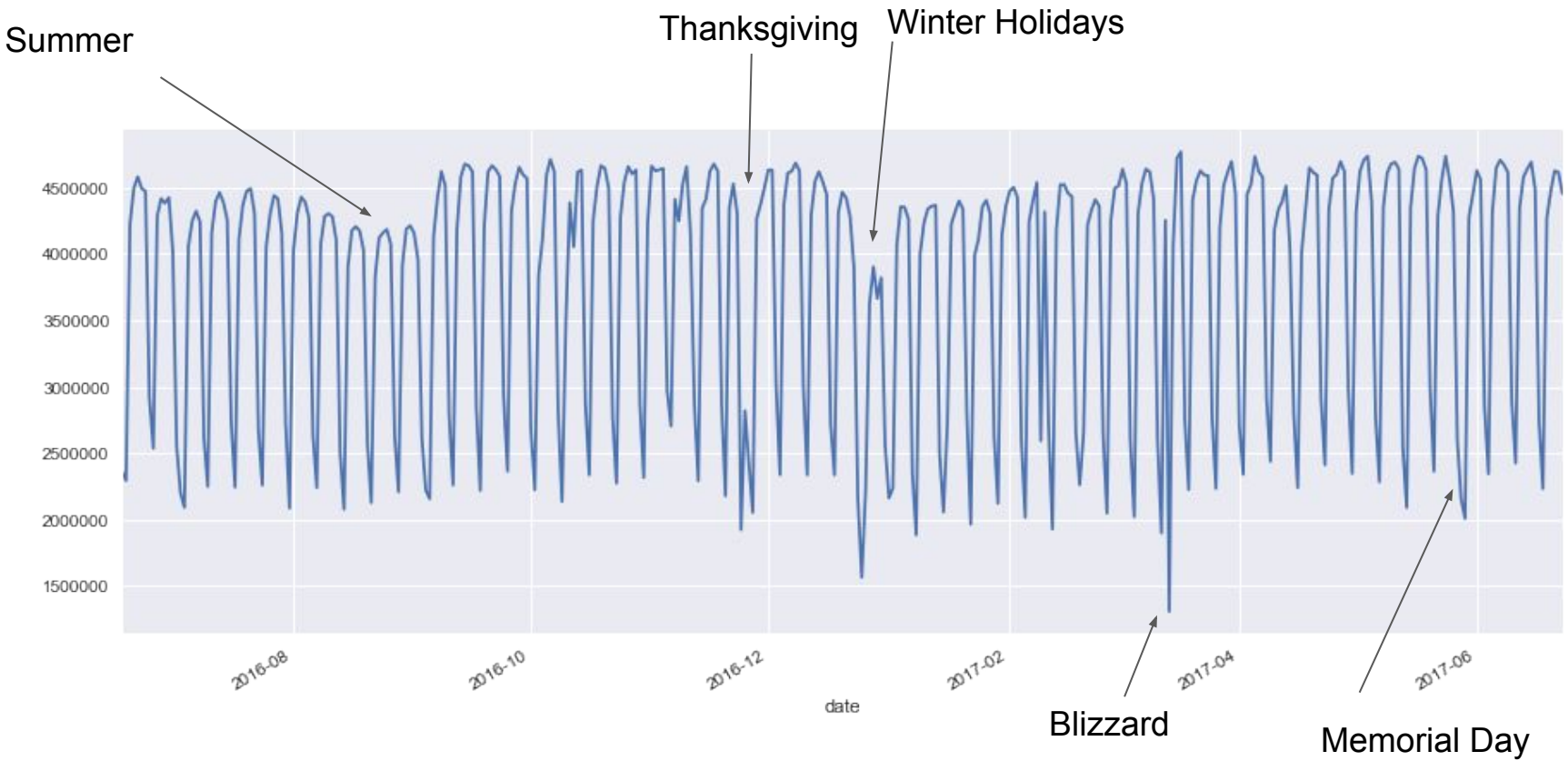




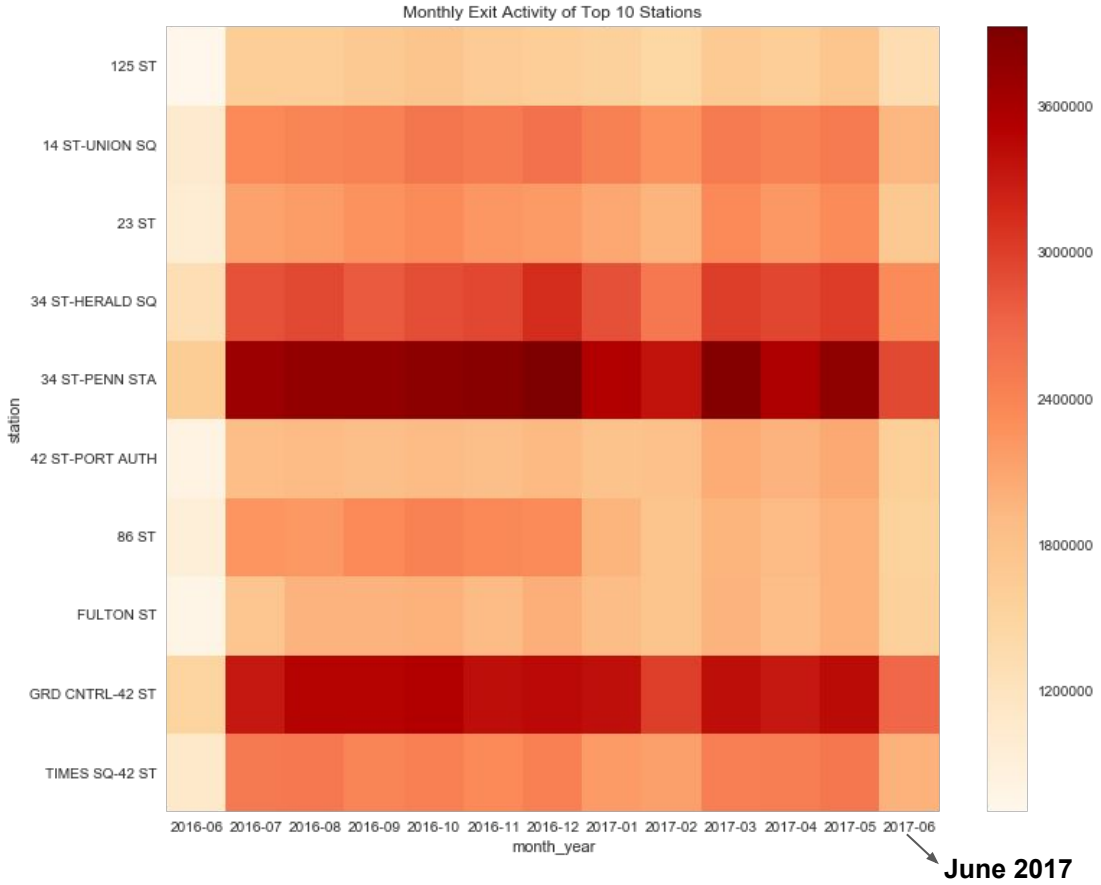
Overview of Data



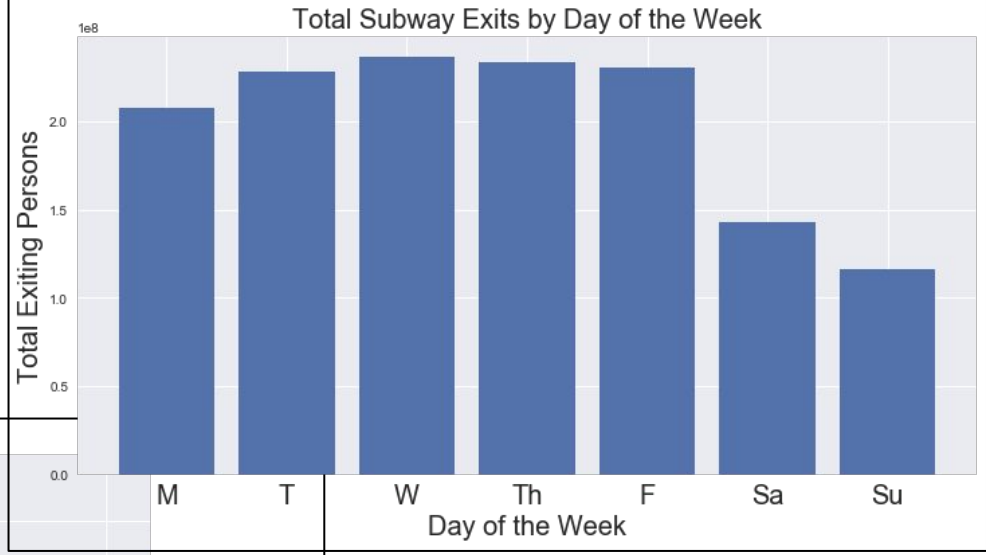
Total Annual Station Exits

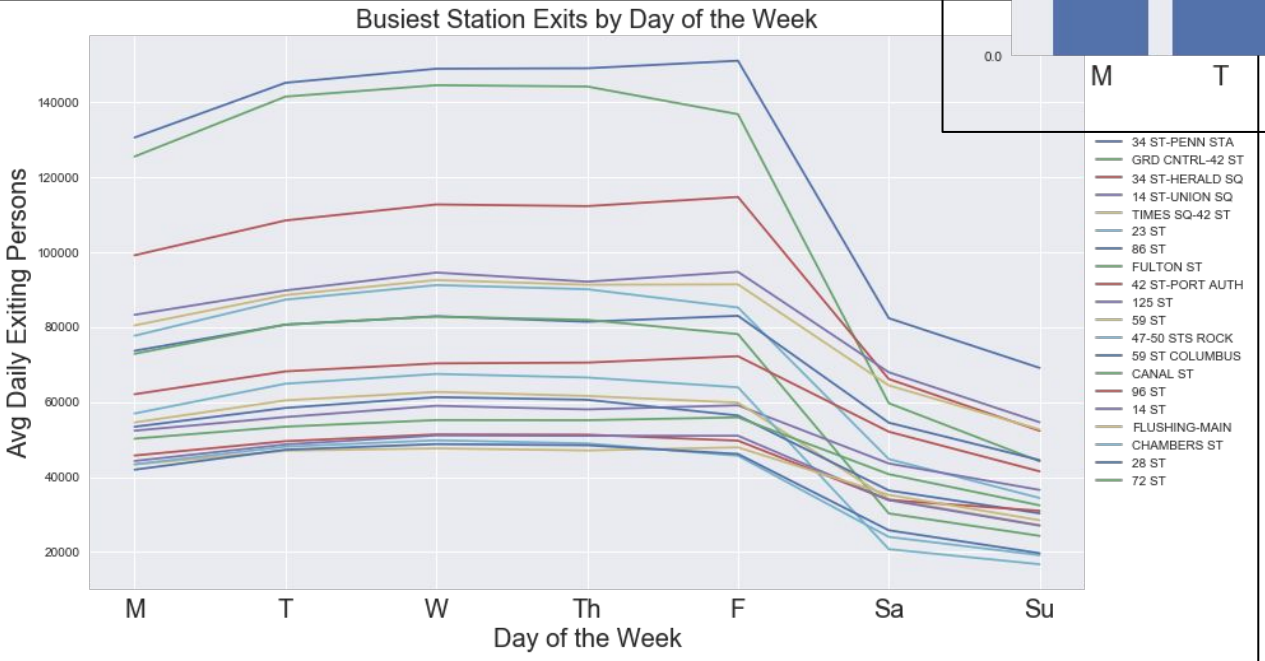


Monthly Exit Activity



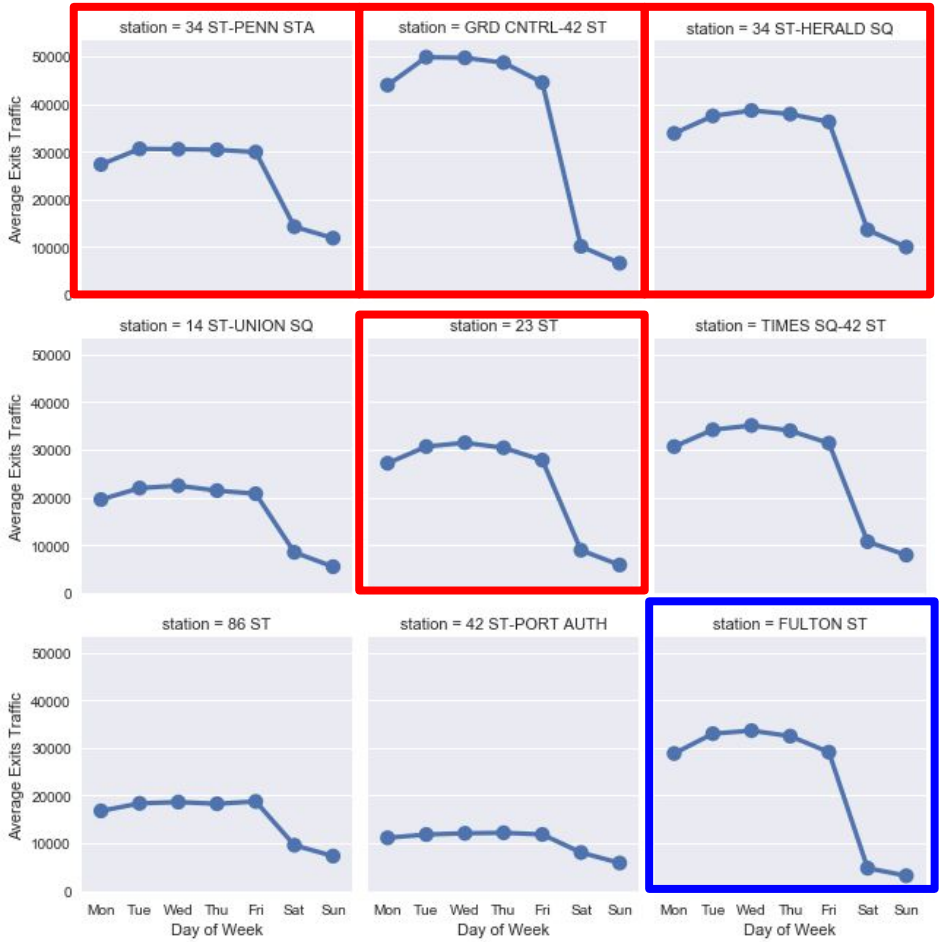
Weekdays Vs. Weekends



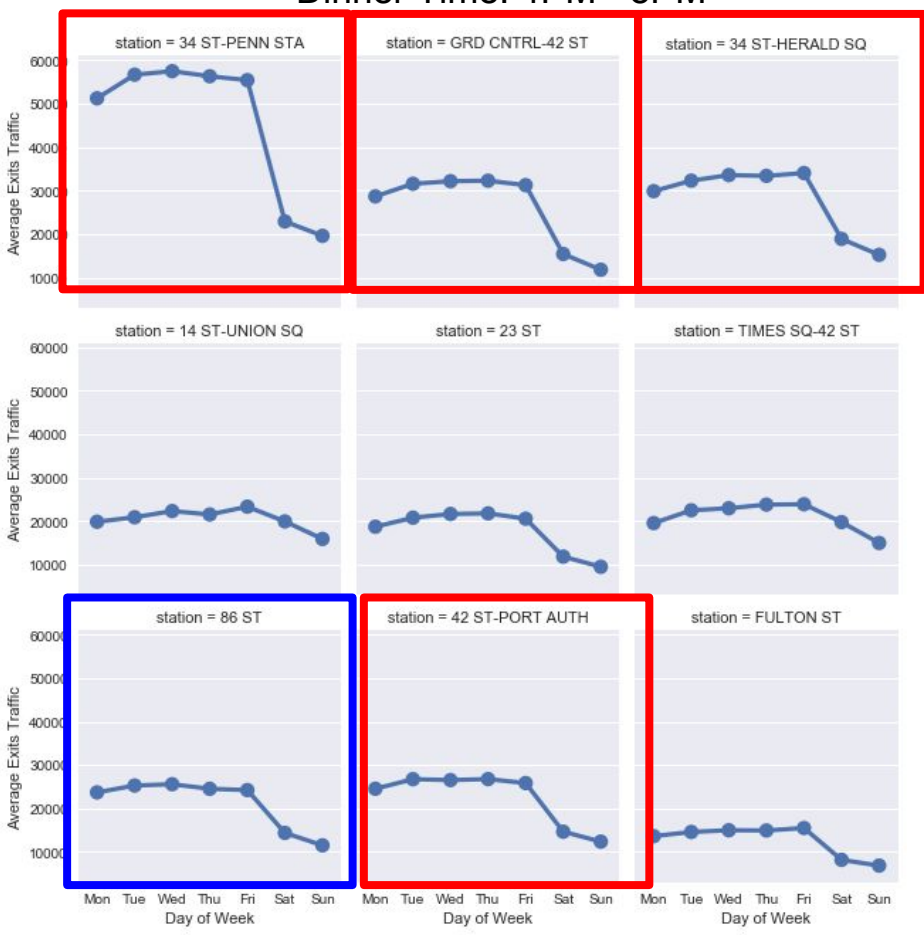


Narrowing down stations

Brunch Time: 8AM - Noon



Dinner Time: 4PM - 8PM



Map

Brunch Time: 8AM - Noon

Dinner Time: 4PM - 8PM

Conclusions and Recommendations

Shortlisted Stations

- Lunch: Grand Central Area and Wall Street Area
- Dinner: Grand Central Area, Upper East Side

Time of operations

- **Seasons** - summer & winter are slower than fall & spring
  - **Months** - if planning to start in the near term, Sept/Oct is best
- **Weekend** traffic 43% less on average than Mon-Fri
  - Varies significantly per station

Next Steps

Our analysis makes simple assumptions. There is a lot more we could do!

- Competition
  - Look at the current truck distributions and analyze the niche market
  - Local density of brick and mortar restaurants
  - Parking/Space availability near the station
- Non-peak time windows
  - Busiest stations after 8pm
  - Holidays
- Cost data
  - Gather more data to calculate ROI