



Data Science and CUPS

Codename: Project Benson

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Understanding CUPS



A mobile app that offers mobile payment and discovery for coffee shops in major U.S. cities.

Business model: two monthly subscription plans. (1) enjoy a set number of coffee and tea beverages, or (2) pay a flat fee for unlimited monthly drinks.

A data driven approach can increase the user base and encourage consumers to purchase coffee using the app.

Competitive Positioning

Accessibility is everything.

- CUPS builds on customer loyalty of working people dedicated to a daily habit.

Implications:

- The **mobile platform** monetizes this habit with a service aimed at making the transaction and ordering process easier.
- Is accessibility optimized?

Defend against competitors.

- Mobile transactions are increasing among CUPS competitors.

Implications:

- Starbucks's 2016 [first quarter earnings call](#), revealed that 21% of all Starbucks quarterly transactions (6 Million+) are done on mobile at point of sale and in the Starbucks' app. In Dec. 2016, this number was 22%.
- *How can CUPS capture more market share?*



What can we do for CUPS?



Analytical Approach

Target Market

- Commuters using the Metropolitan Transportation Authority (MTA) system
- Highly likely to purchase morning coffee between subway station and the office

“Commuter Stations”

- Maximum advertising exposure

Define main criterias:

- High exit rate in the morning
- High entry rate in the afternoon or evening

Analytical Approach

Data Analysis

- Analyzed MTA turnstile data from March 2017
- Morning hours: 4 AM to 12 PM
- Afternoon and evening hours: 4 PM to 8 PM
- Total amount of commuter traffic by station
- Visualize data analysis

Outcome

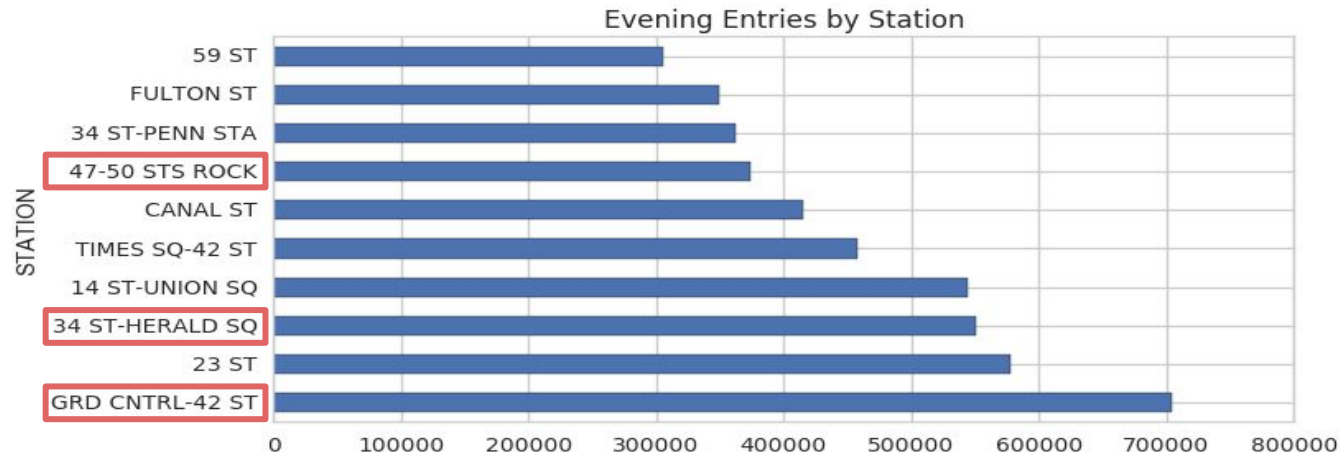
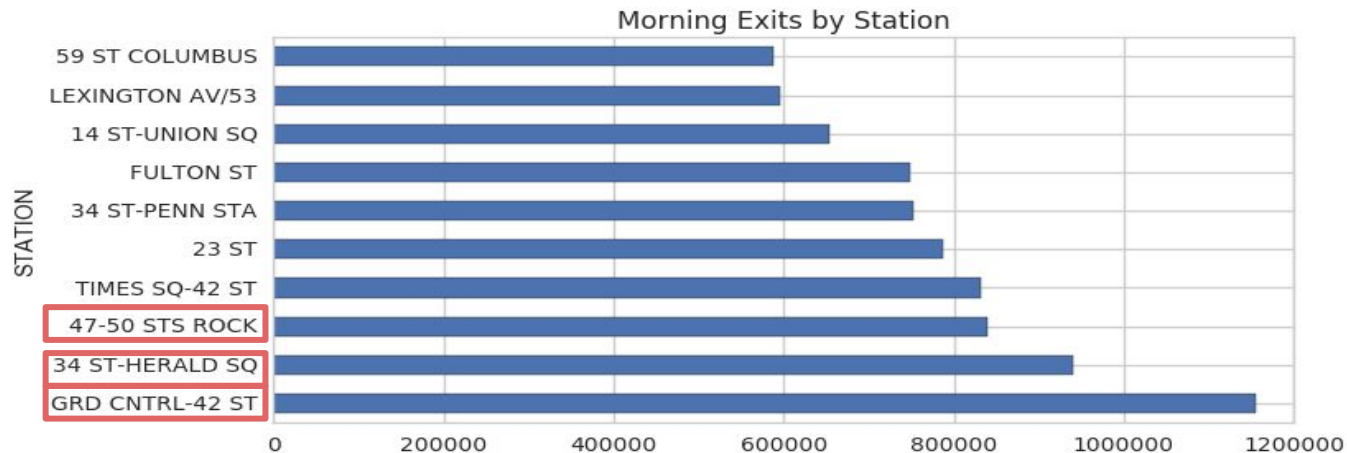
- Increase user base with posted advertisements in high-traffic MTA stations
- Encourage purchases through push notifications with discounts for CUPS coffee shops at peak hours

Problem Statements:

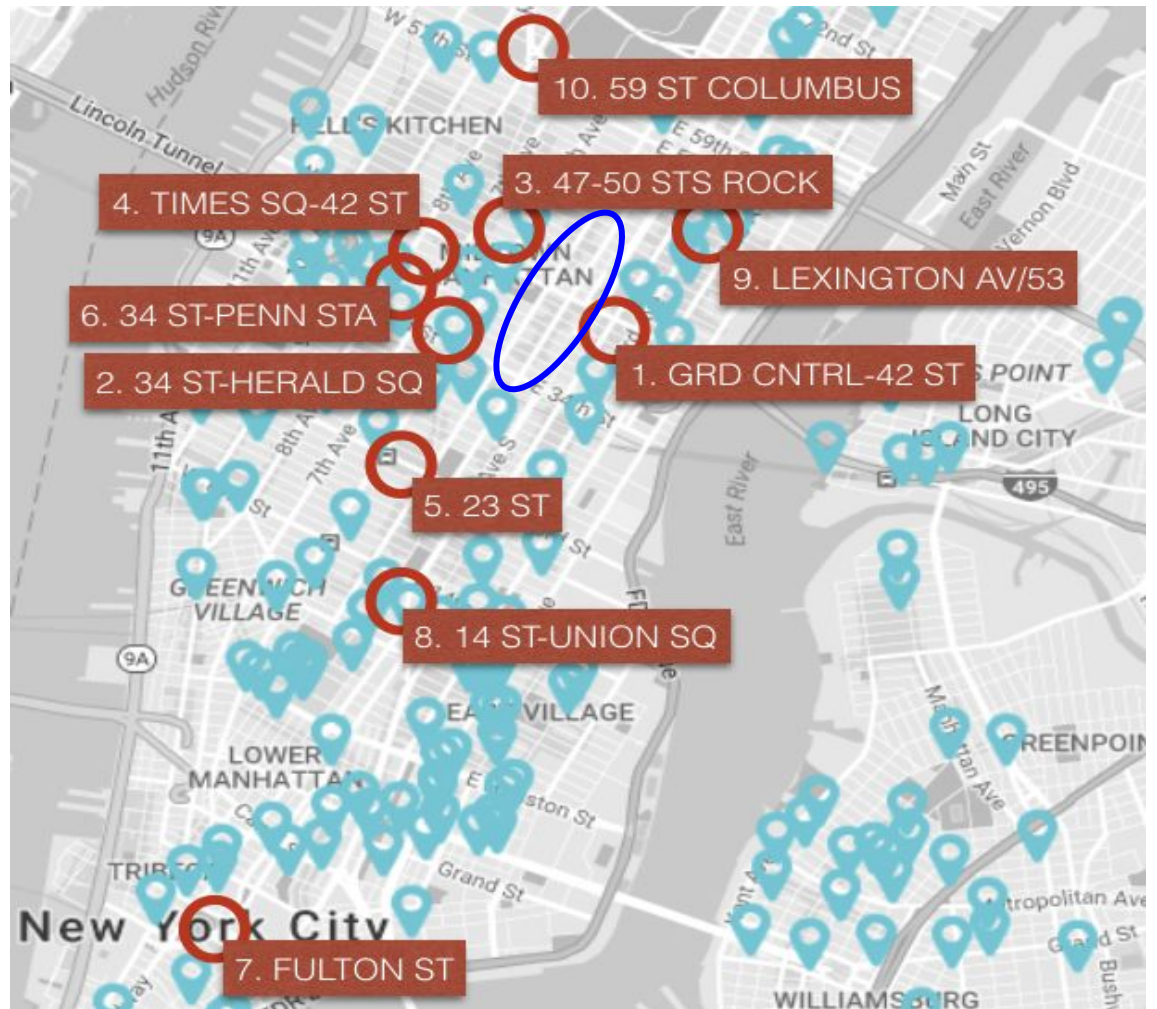
- Given weekday commuting patterns on MTA, what are the busiest stations?
- When is the best time to prompt app users to buy coffee?

Results & Analyses

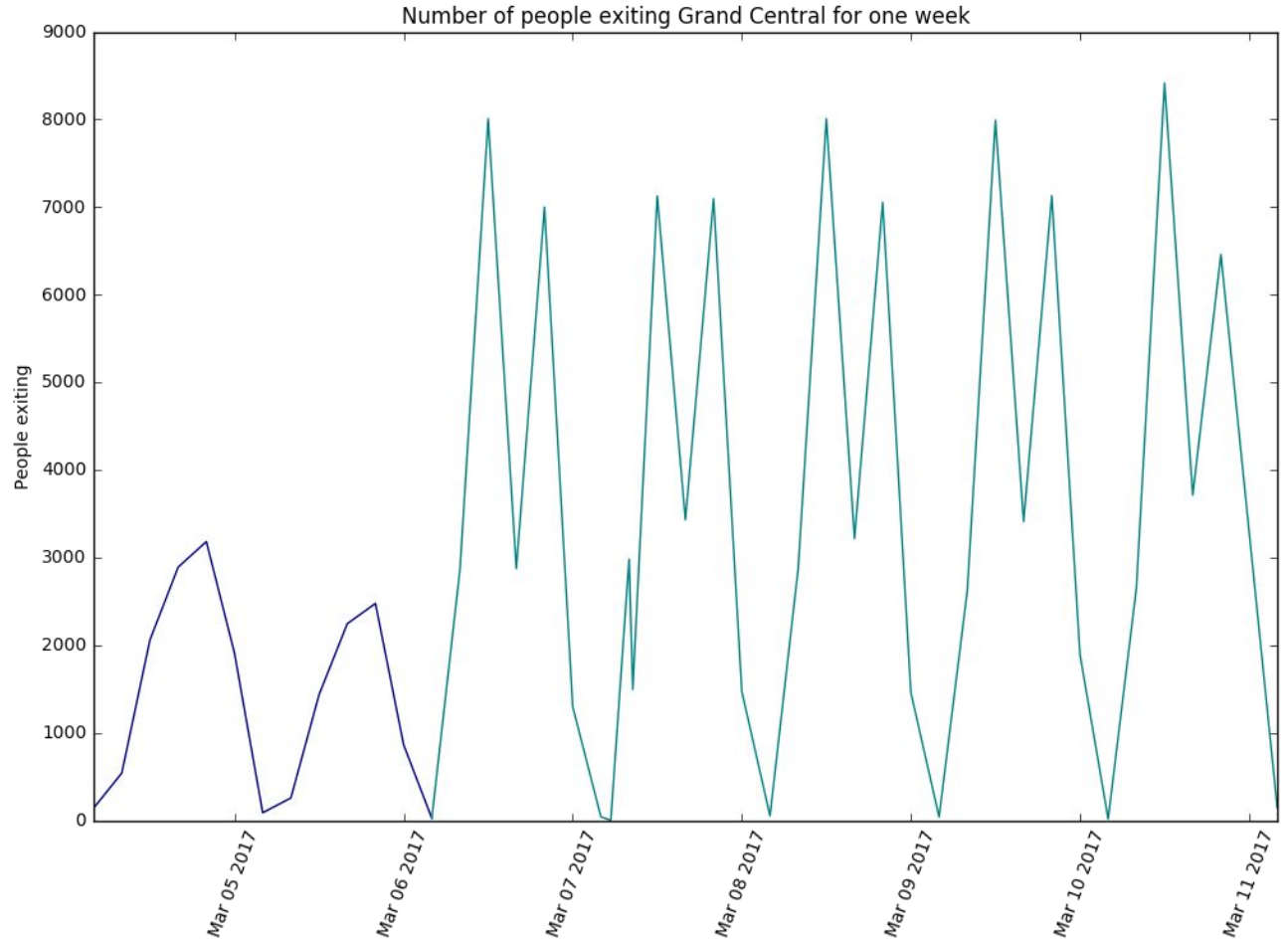
Busiest Commuter Stations



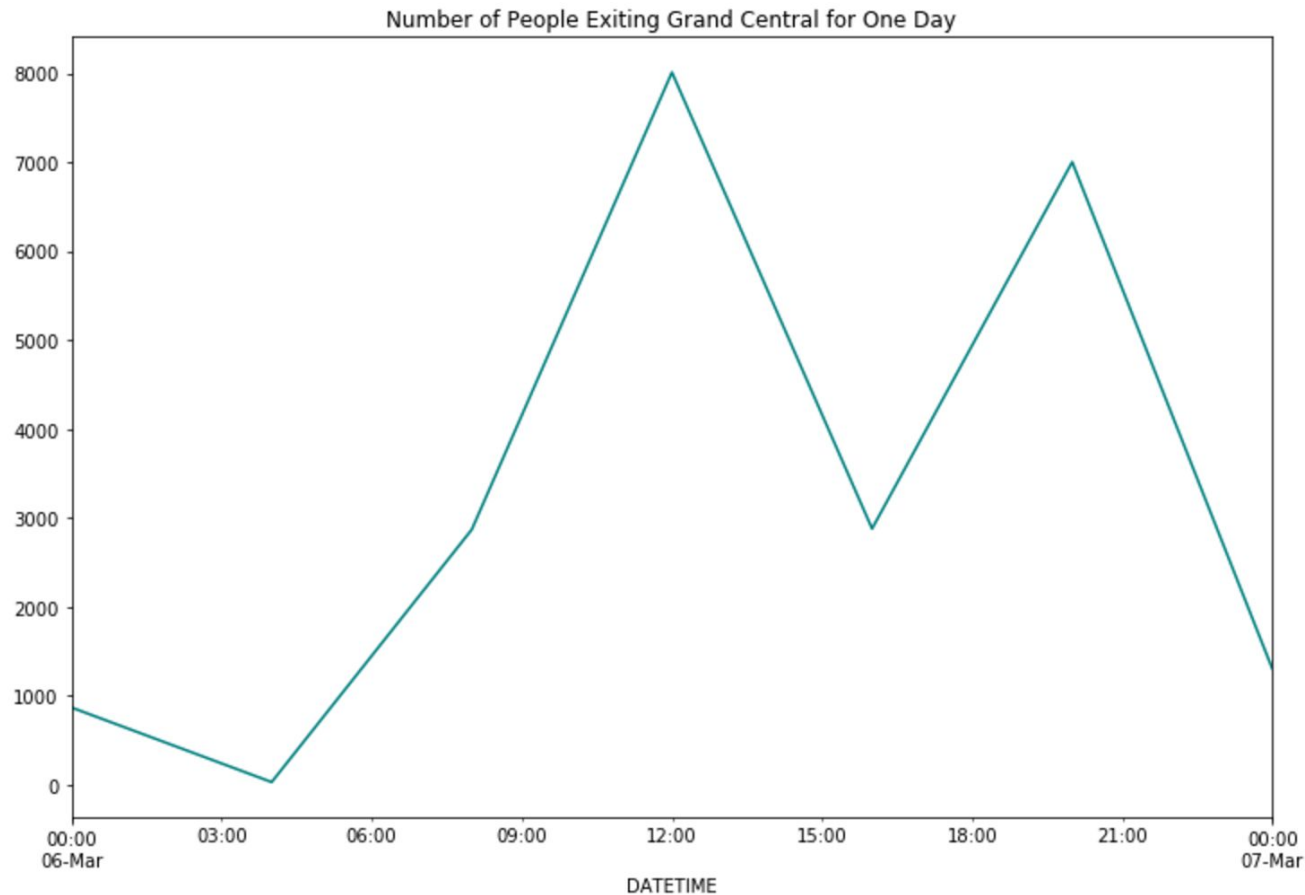
Locations of Busiest Stations



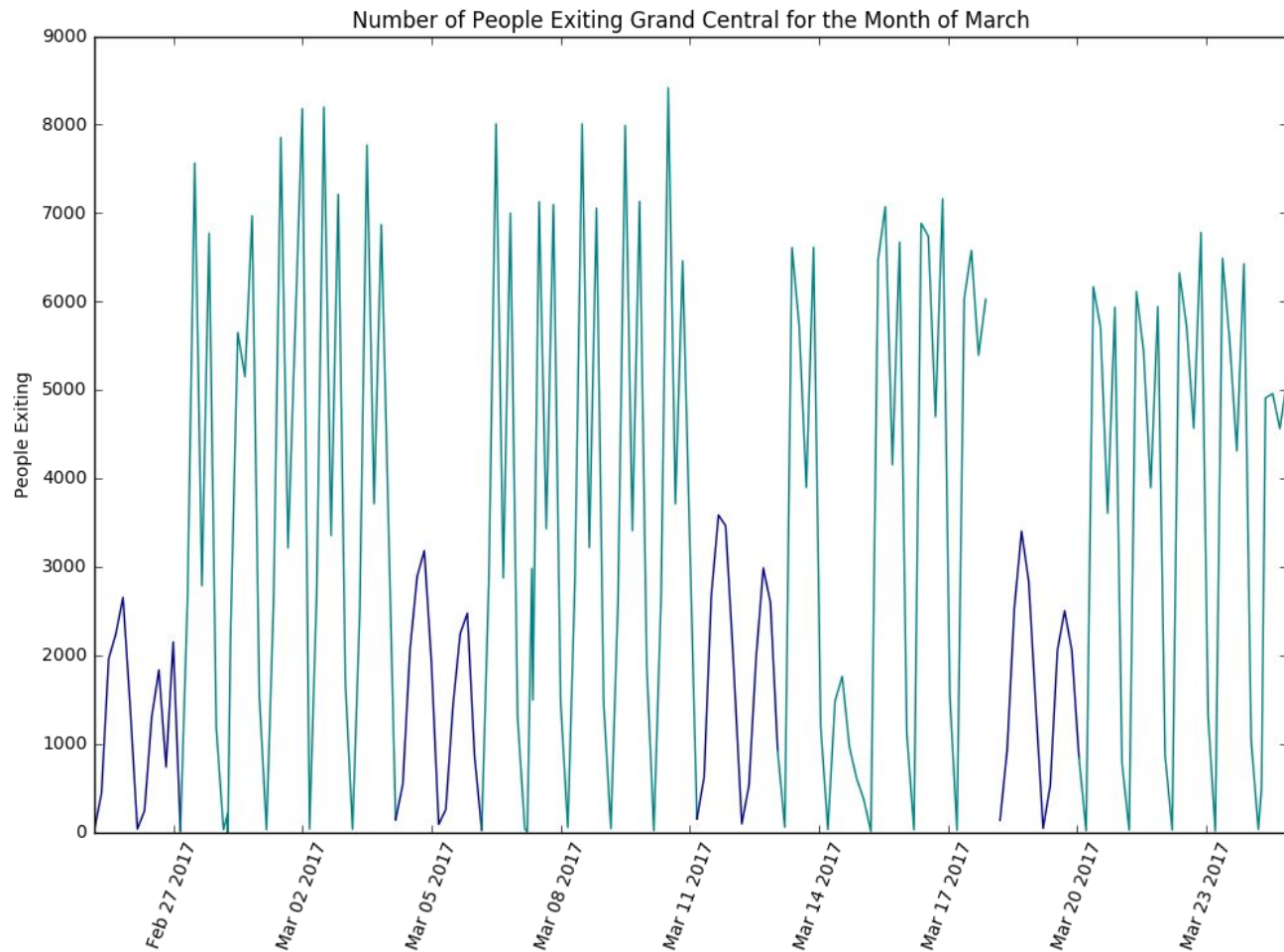
Weekly Cycle of Exits



Daily Cycle of Exits



Monthly Cycle of Exits





Conclusion and Future Works



Conclusion

- Target the commuters of the busiest ten stations with posted advertisements encouraging CUPS app downloads.
- Push notifications with CUPS discounts should be sent out between **8AM and 12PM on weekdays.**
- Develop partnerships with coffee shops in areas of high commuter density and low CUPS coverage.

Possible Future Works

Explore seasonality

- Explore how subway traffic varies by month to further target ads

Expand analysis to other cities

- San Francisco BART data

Tap into nightlife market

- Partner with restaurants and bars with happy hour discounts
- Targeted ads in MTA stations with high nightlife traffic

Questions

Slack us emojis:

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