
Malone's Cones

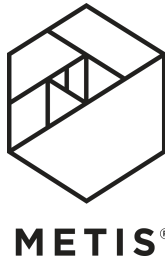
Business Plan Feasibility Study

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EDA
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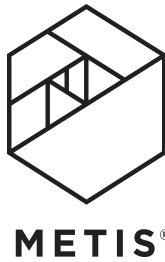
<https://www.youtube.com/watch?v=a86PkIIWbnM>

Introduction



- **Malone's Cones:** a company that owns and operates a network of ice cream carts in Scranton, PA
- **Business Goals:** expand into the lucrative Manhattan market
- **Implementation:** Build brand recognition by deploying ice cream carts to areas of Manhattan with high foot traffic
- **Project Goals:**
 1. Identify regions for morning and afternoon deployment
 2. Avoid regions with brick-and-mortar ice cream stores (competitors)

Methodology



Data: MTA turnstile data

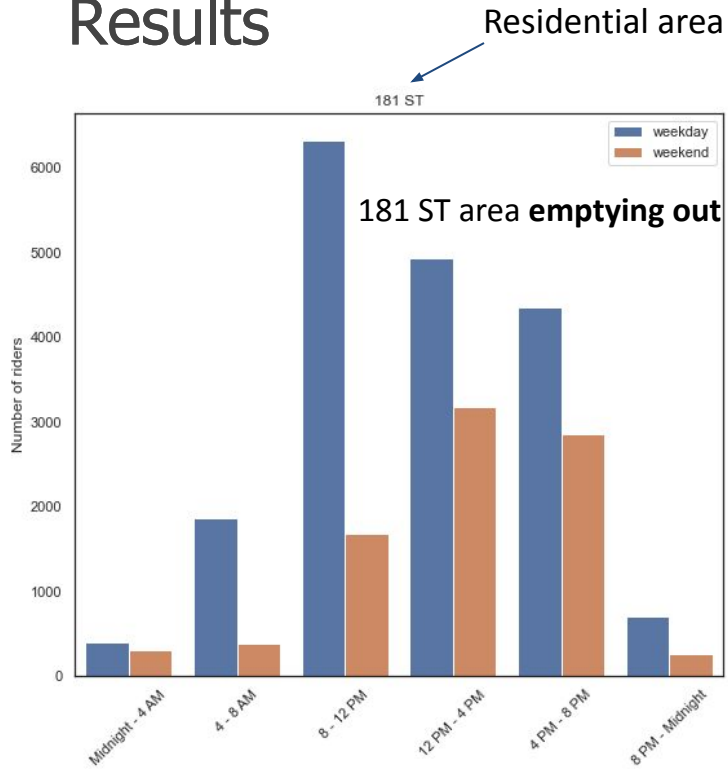
- Number of entrances, date, time
- Ice cream store locations (scraped from Google Maps)

Metrics for desirable deployment regions:

- Place carts where people spend most of the day
- Time when subway peaks indicates area is emptying out

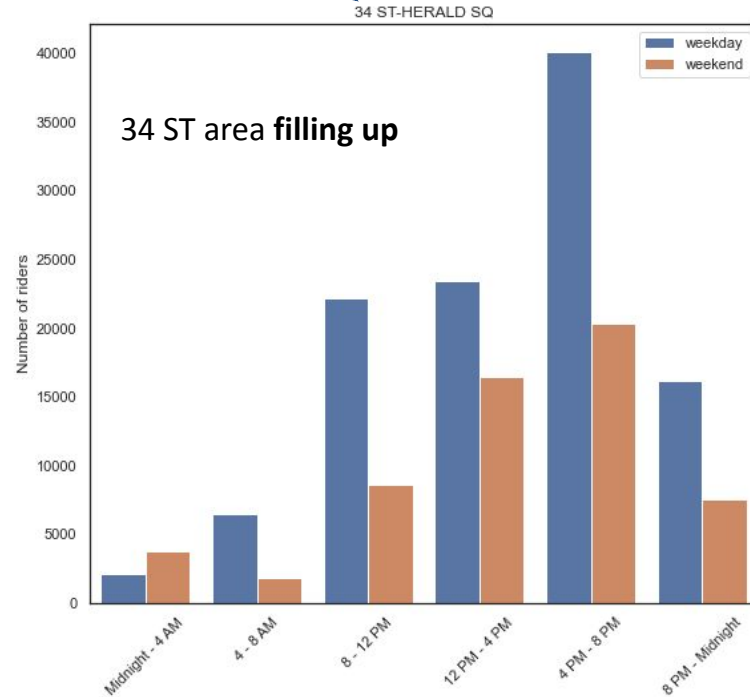
Tools: Python, Pandas, Matplotlib, Seaborn, Jupyter Notebook, SQL, Phantombuster (free web scraper), Google Maps

Results

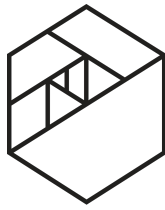


Peak morning activity indicates area population decreases in the morning

Commercial area



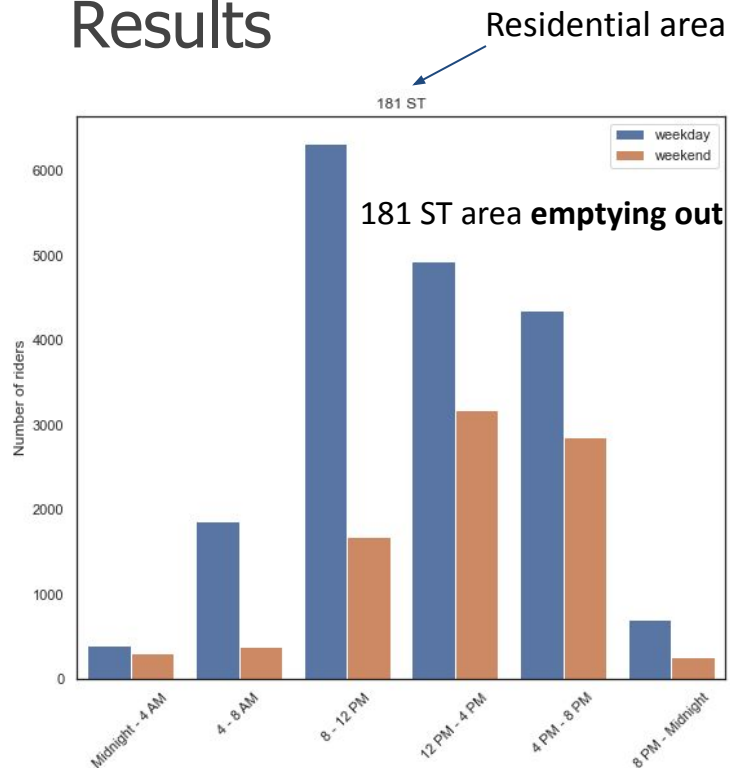
Peak afternoon activity indicates area population decreases in the afternoon



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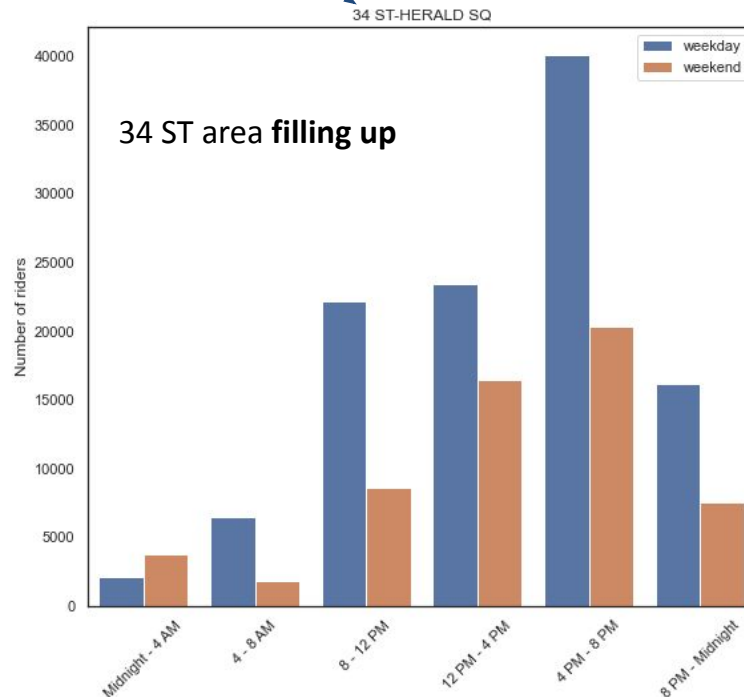
Results



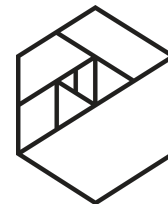
ICE CREAM STORES	Distance (miles)
—	—

In residential neighborhoods: fewer competitors and customers, but likely cheaper permits

Commercial area

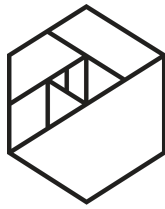


ICE CREAM STORES	Distance (miles)
Carvel	0.09
10Below Ice Cream	0.21
Popbar	0.26
Milk Bar NYC Flagship	0.28



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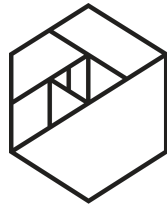
Conclusions

- Subway data may be useful in estimating how an area's population changes throughout the day
- Commercial areas likely have more potential customers but also more competitors and probably higher permit fees for carts

Recommendation

- Deploy carts to commercial areas during working hours despite the competitors and fees because rider numbers in sampled commercial areas are about **6X higher** than residential areas
- Increase scope of study to all stations and analyze exit data

Future Work



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- Add exit data analysis to help determine for more granular detail on each area's population changes throughout the day
- Analyze all subway locations
- Obtain larger ice cream store data set



Work Performed

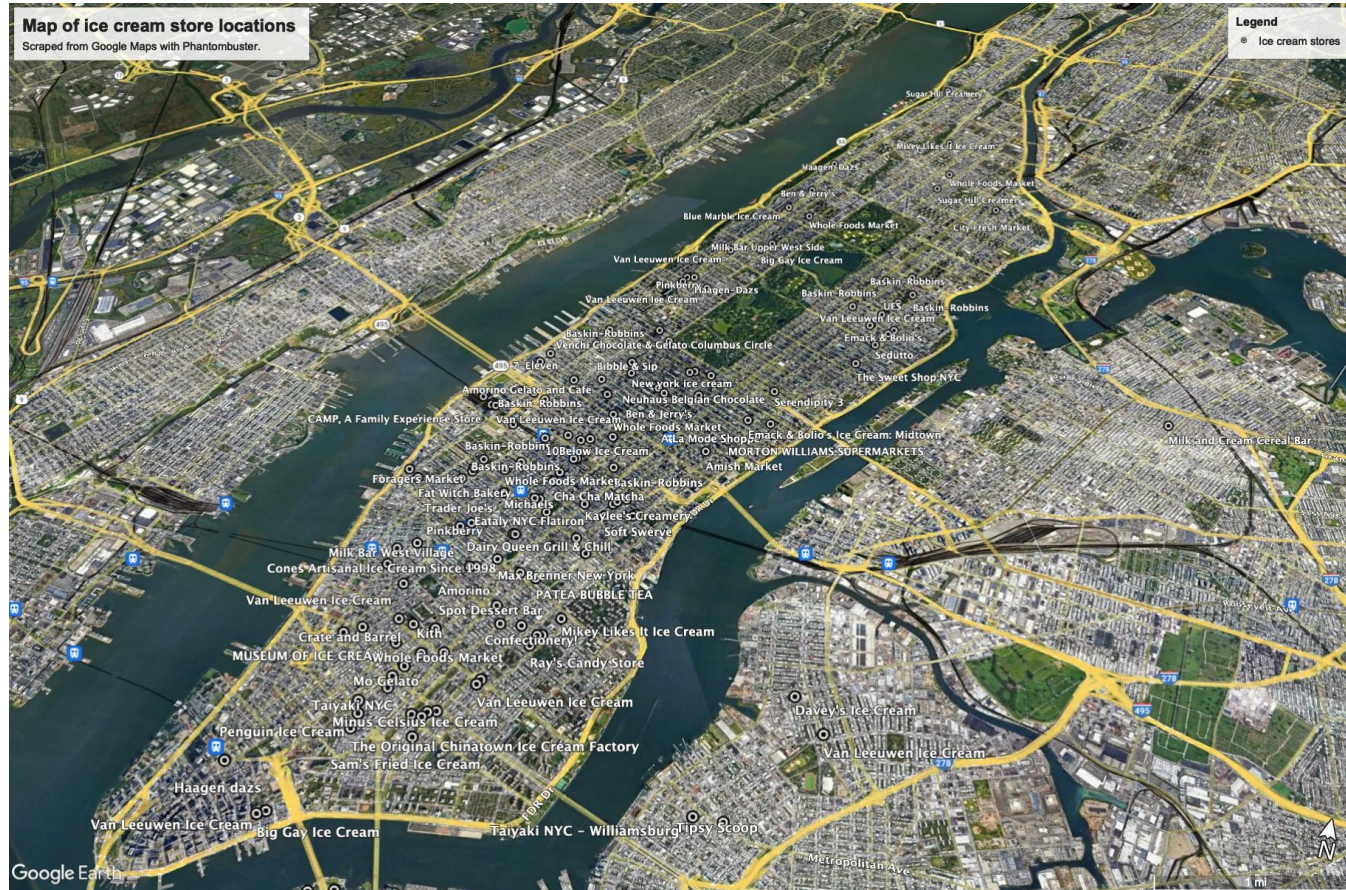


Work Presented

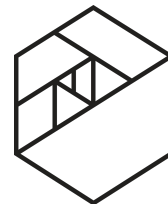


Appendix

Appendix

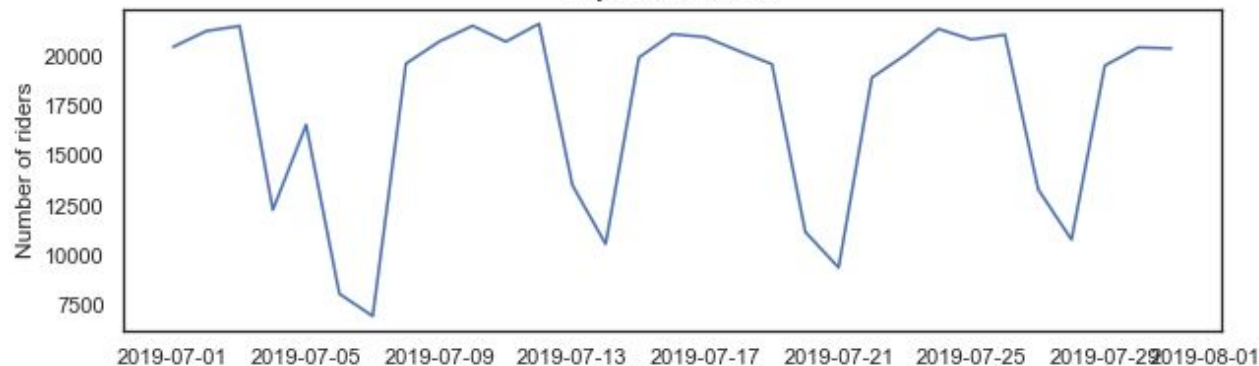


Appendix

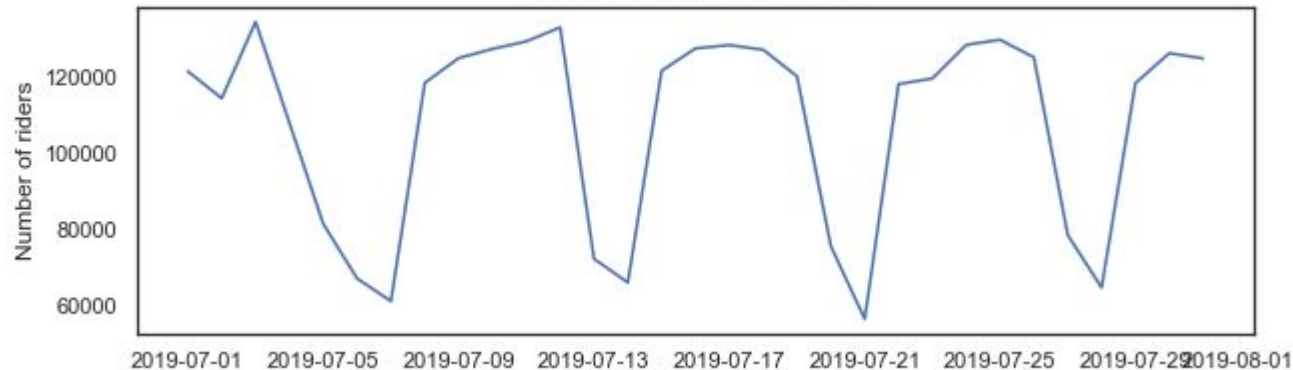


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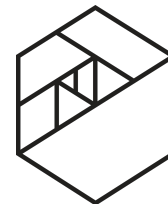
July data for 181 ST



July data for 34 ST-HERALD SQ



Appendix



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