

Project Tour de France

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Introduction



- Audience: NYC Dept. of Transportation (DOT)
- Goal: Improving the day-to-day user experience
- Path: Station deep-dive and resource management

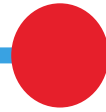
History

May 2013:



Citi Bike launch

November 2018:



Lyft to invest
\$100mm
over 5 years

Today:



Average daily
ridership > 100k

Problem

- Inability to keep up with rising demand
- Insufficient bike/dock rebalancing
- Repeated user frustration → Decreased future use

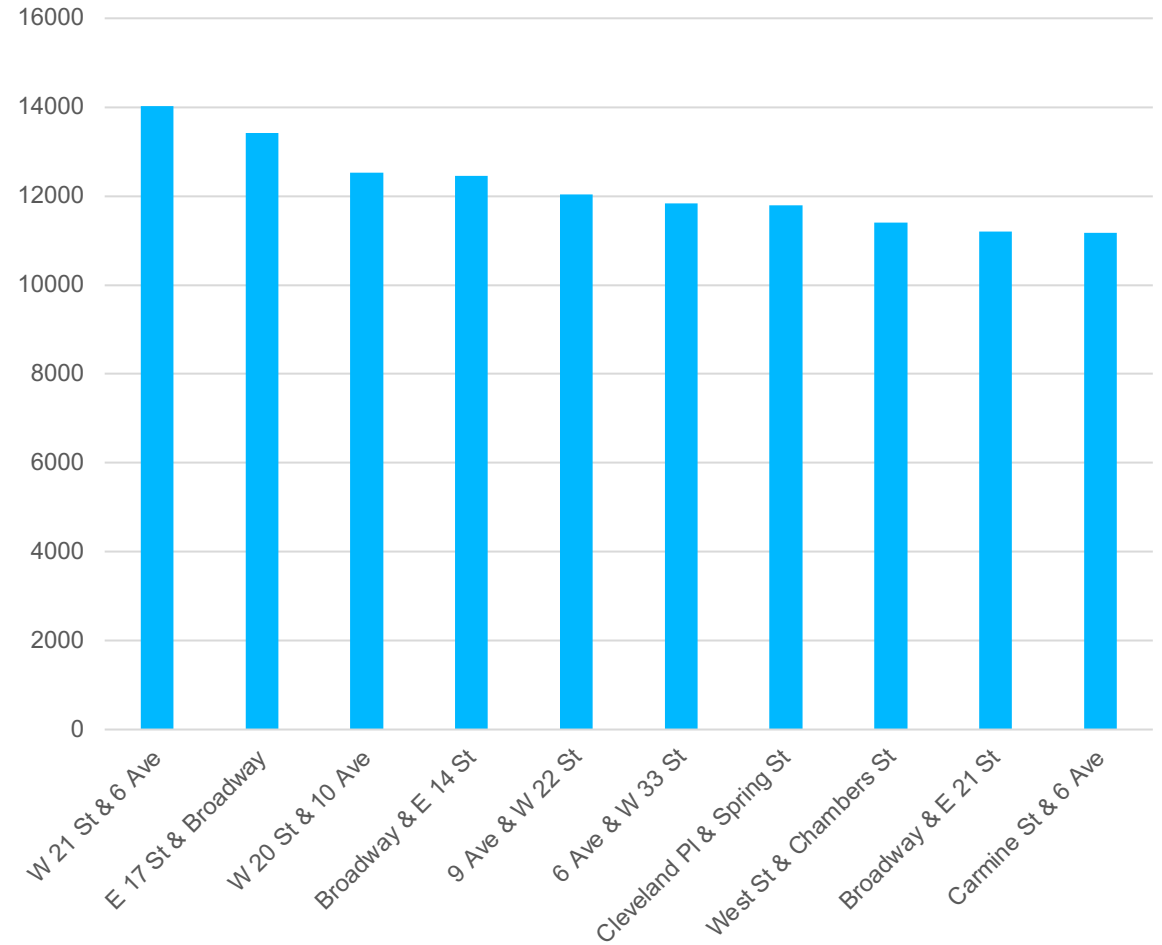
Impact Hypothesis

- Identify most trafficked stations/areas
- Better and greater use of city resources
- Safe and satisfied riders

Data & Methodology

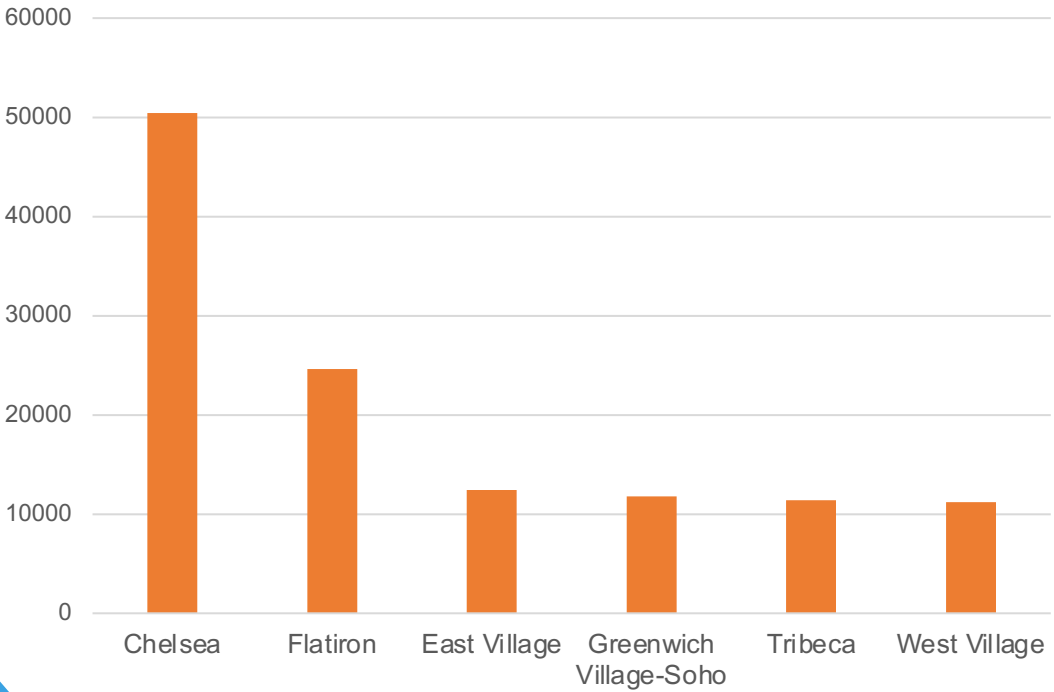
- September Ride Data
- Pandas → Top 10 Stations
- Excel & Tableau

Top Ten Stations

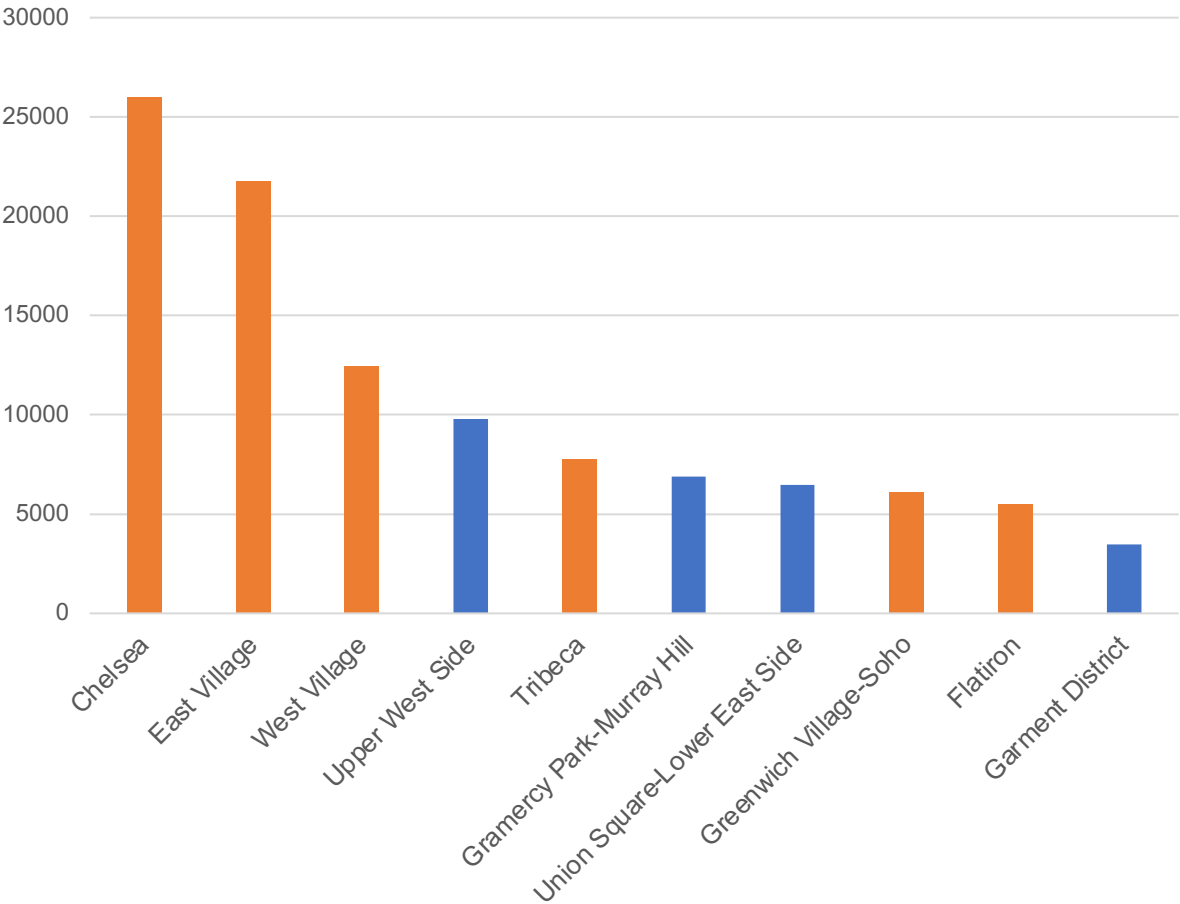


Preliminary Analysis

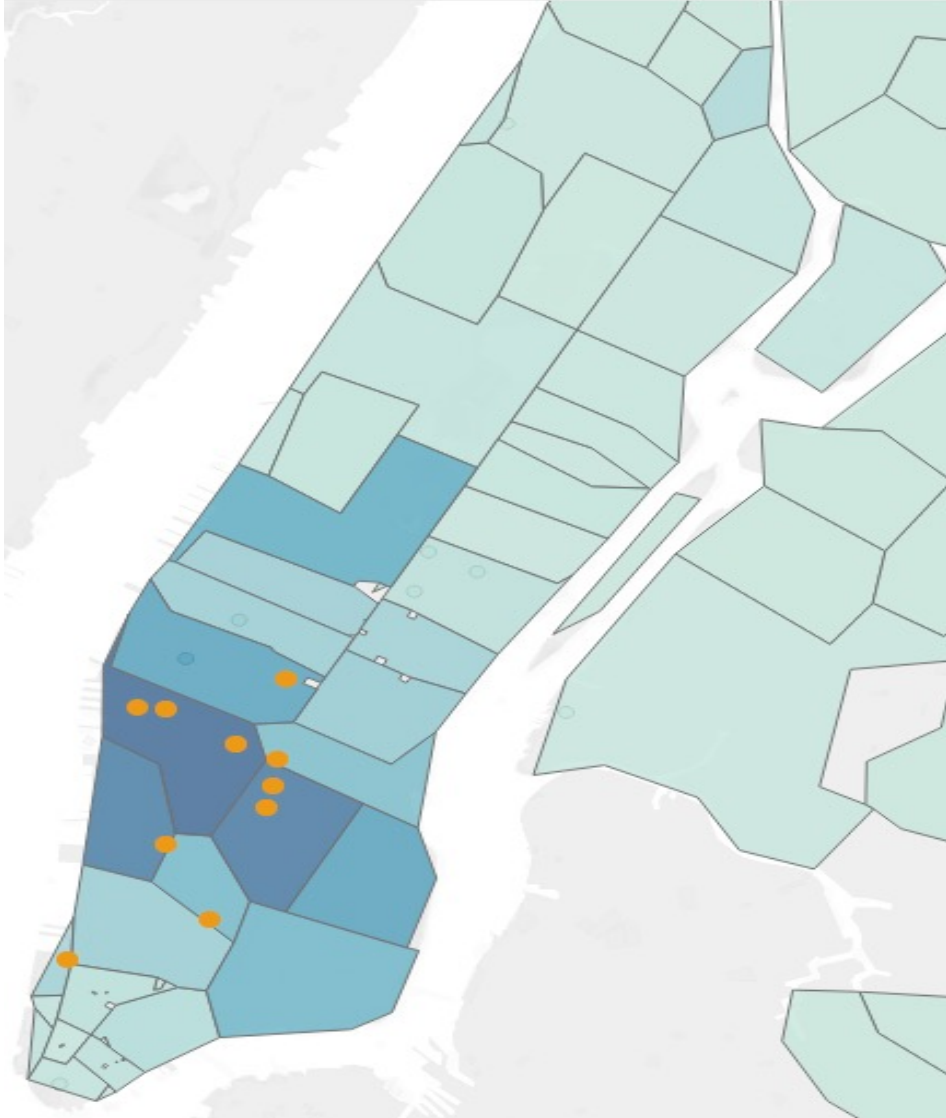
Start Stations by Neighborhood



Top 10 Destination Neighborhoods

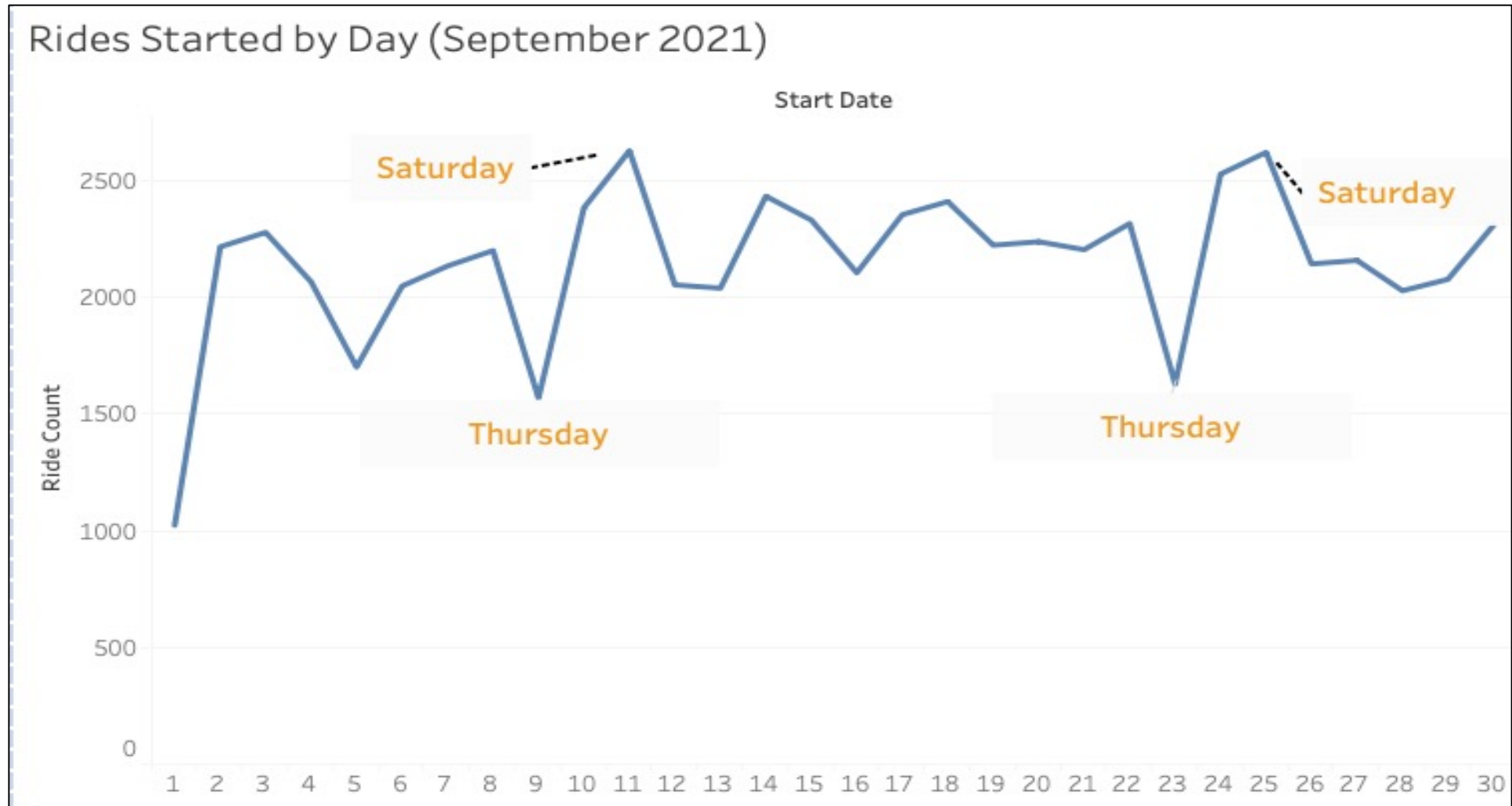


Preliminary Analysis



- Orange Points: Top Ten Stations in Analysis
- Heatmap: Density represented by rides ended at Zip Code

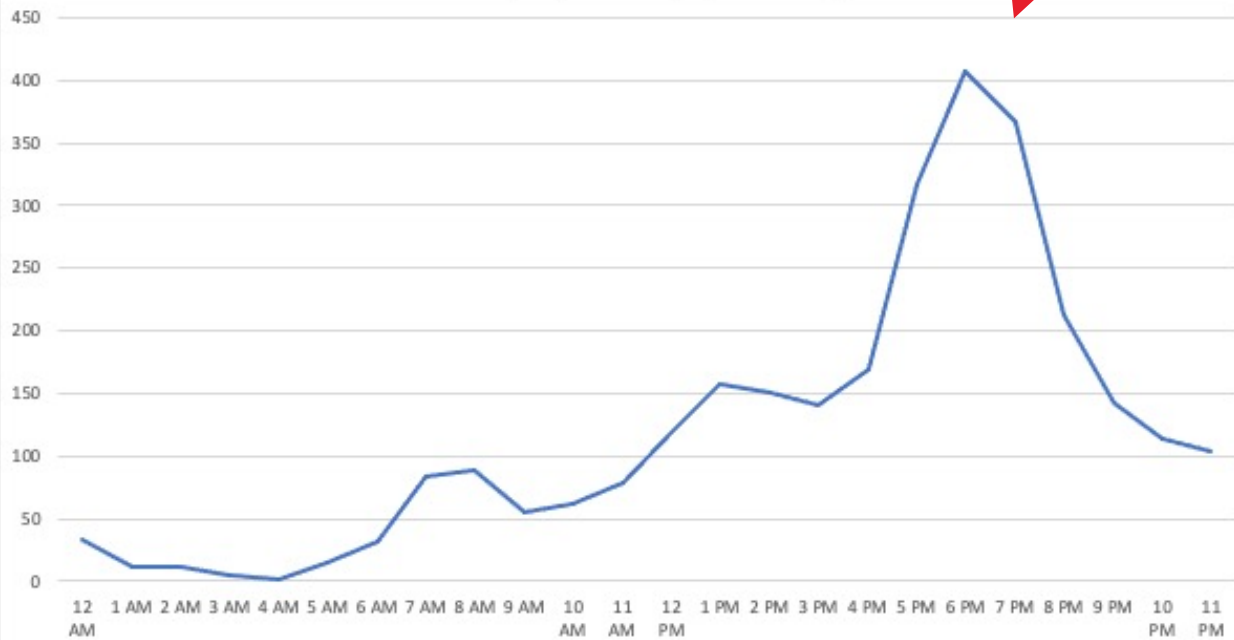
Preliminary Analysis



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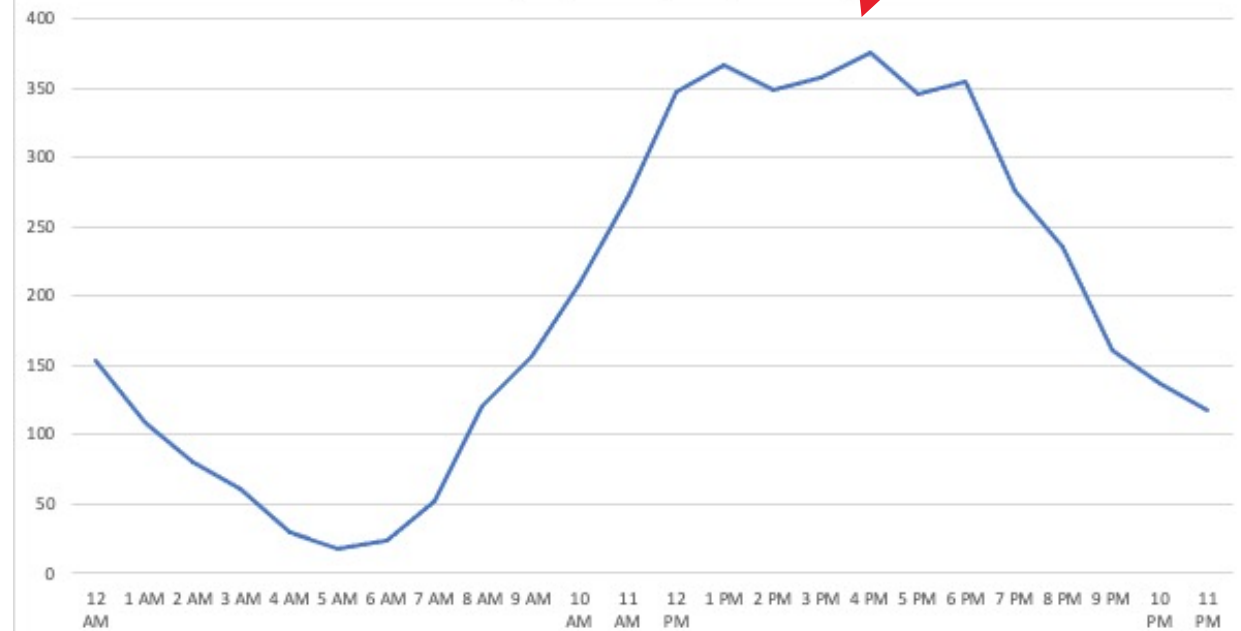
5 & 6 PM peak:
evening rush hour

Ridership by Hour 9/9 (Thursday)



12-6 PM peak

Ridership by Hour 9/11 (Saturday)



Insights and Recommendations

Busiest time and place: Saturdays and evening rush hours
generally in mid to lower Manhattan

Add docks in anticipation of weekend evening rush hour

Friday evenings to add docks for Saturdays

Saturday evenings and Sundays to add docks for work week

Looking Ahead

Data:

- Different stations + months
- Continued monitoring: COVID effects

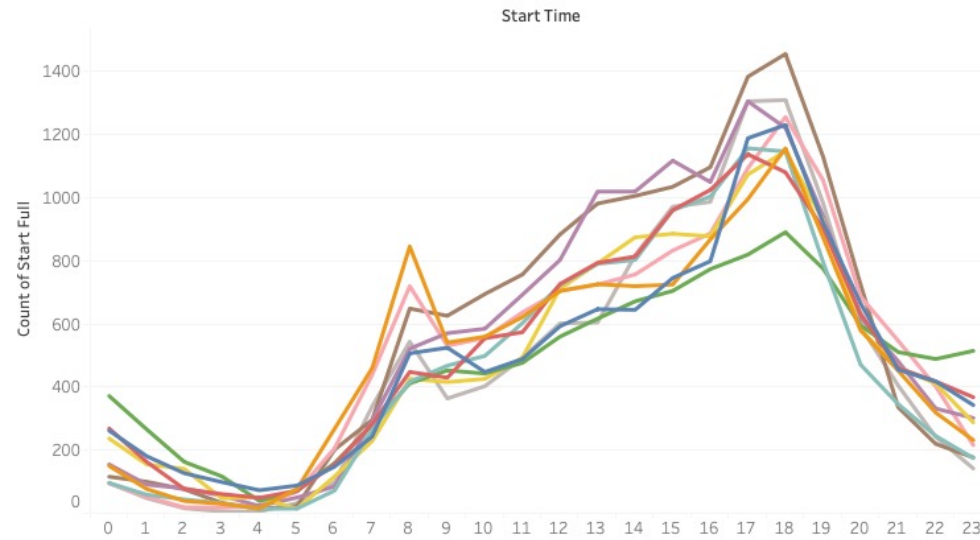
Classification model:

- How to determine if a dock is completely full or empty at a point in time
- Can more accurately allocate resources

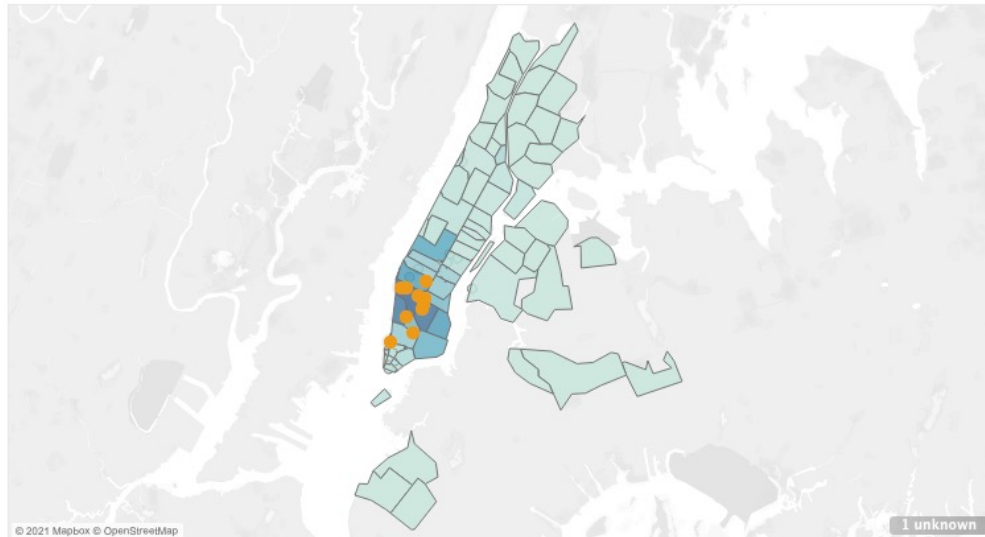
Questions?

Dashboard

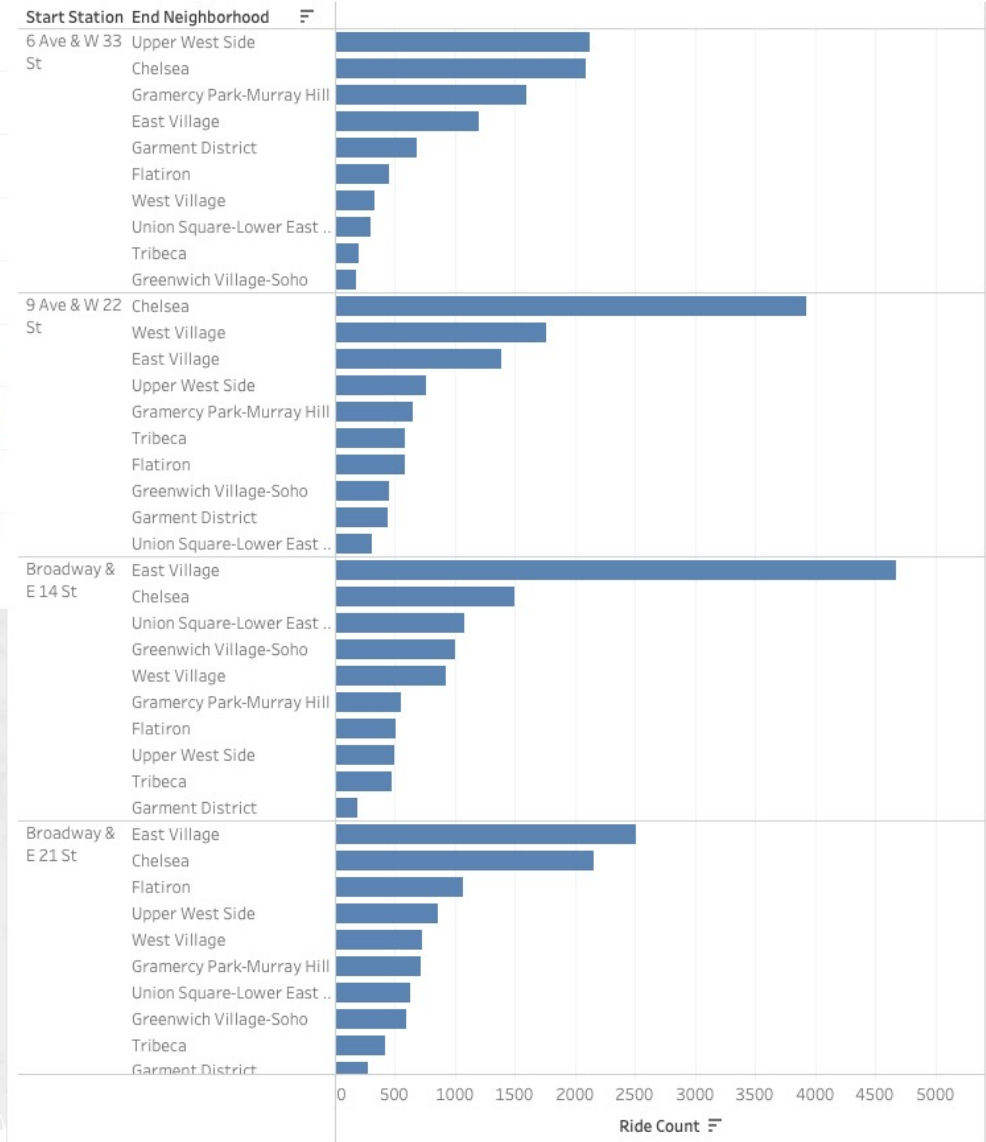
Rides Started by Hour of Day (Cumulative 9/2021)



Map



Top Neighborhoods by Rides Ended

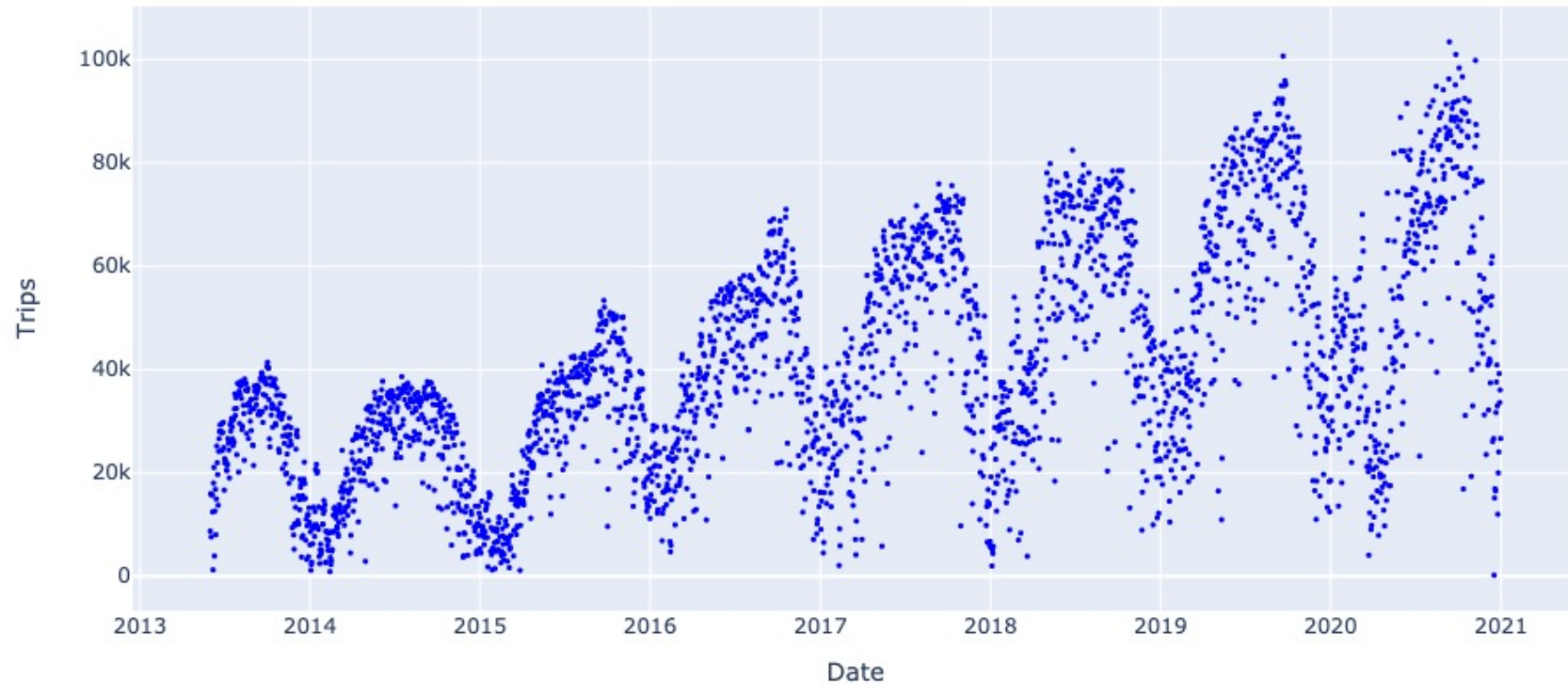


Appendix



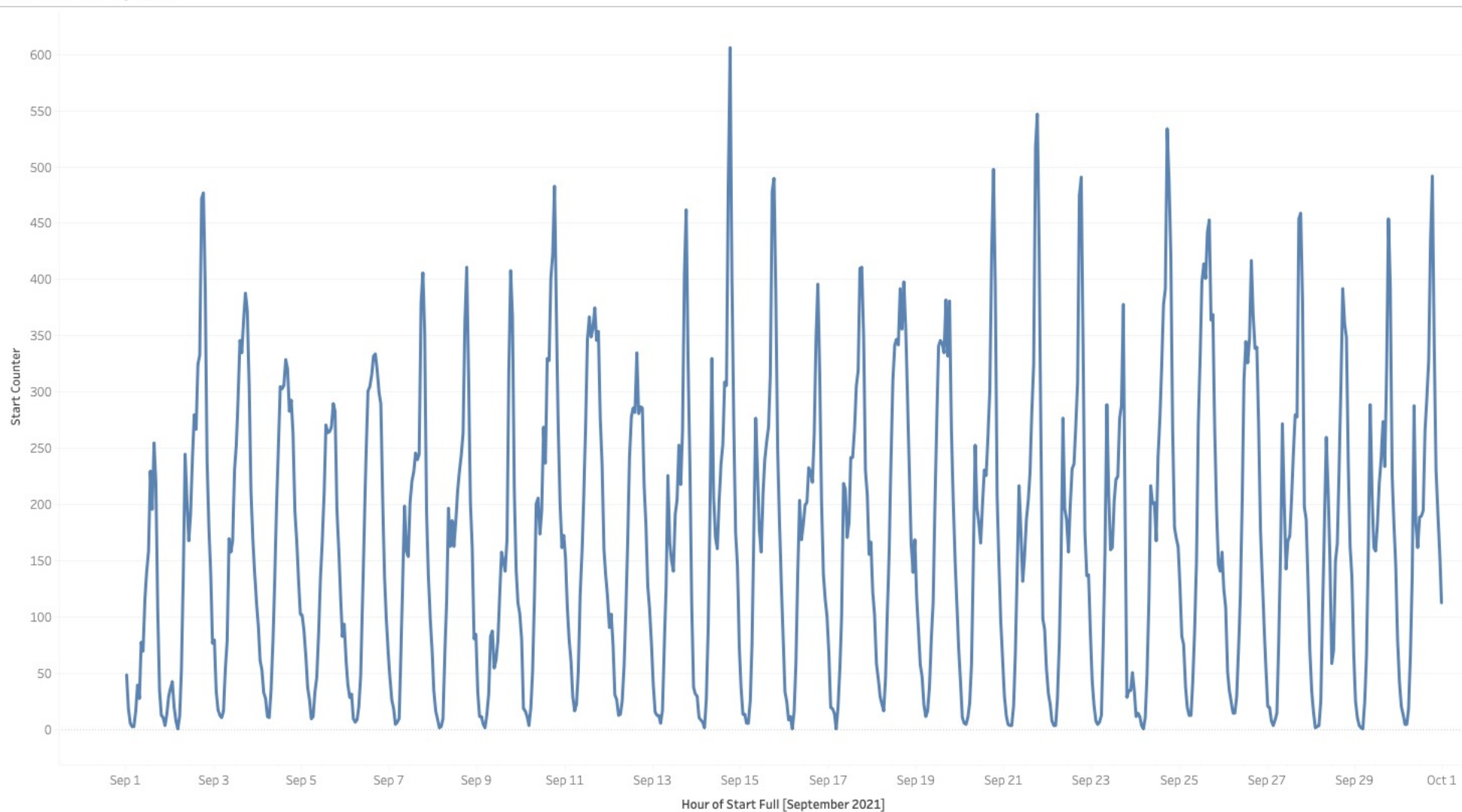
Appendix: Cont.

Citi Bike daily trips 2013-2020



Appendix: Cont.

Ride Starts by Hour



Appendix: Cont.

