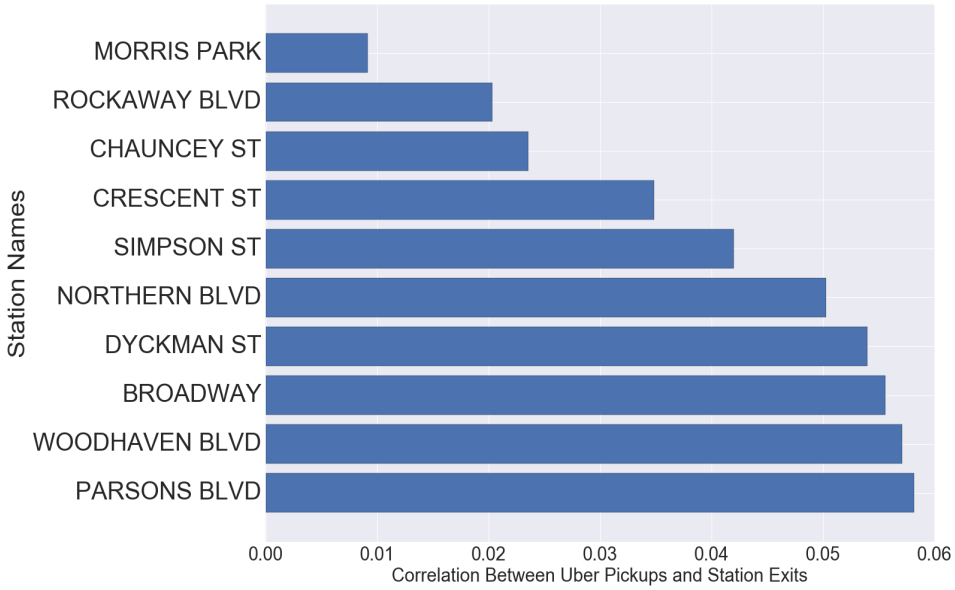
Lyber Project Proposal

Problem Statement

Lyber Inc, is the newest ride sharing competitor to Uber and Lyft in the transportation industry. They are looking for a recommendation on the optimal hotspots to place their vehicles based on inefficiencies found in their competitor Uber current vehicle dispersion. Specifically, they want us to look at MTA turnstile data to assess rider demand at subway stations and to join this with publicly available Uber data to find correlations between passenger volume and Uber pick ups.

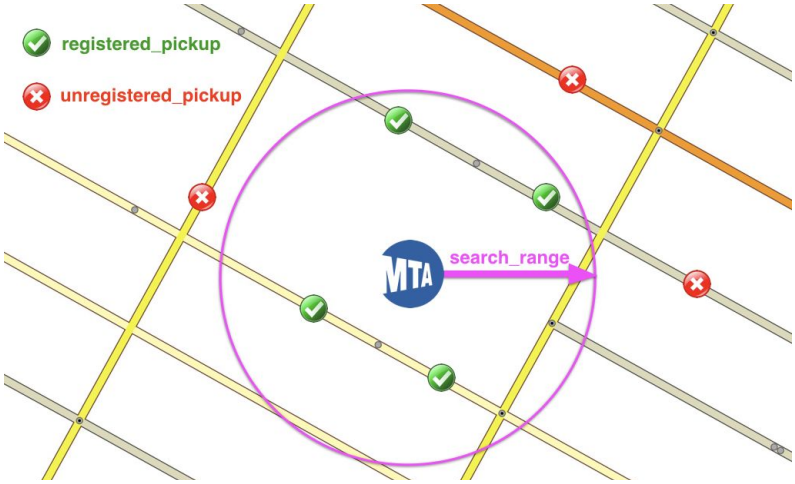
Preliminary Findings

Our preliminary findings gave us the 10 least correlated stations for passenger exits with Uber pick ups. These results have been aggregated for the 6 months of available Uber data. We found the following stations to have the lowest Uber to turnstile exit correlations making them ideal locations :



We recommend targeting these stations for a competitive advantage over Uber.

Methodology



Our methodology involved looking at two data sets: MTA and Uber passenger pickup data set.

From MTA set:
For each station, we tracked the number of people exiting within a time frame of 6 months.

From Uber set:
We looked at all Uber pickups within the same time frame (6 months) and registered only the pickup events that are close enough to the station(within a search radius of 200 meters, an estimate of an average city block size). The reason to include the radius is that the concentration effect dies down further away from the station and has little influence on the chance of pickup.

We then calculated the correlations between number of exits and number of pickups for all stations within the aforementioned time frame. The lowest 10 stations are identified as opportunity areas(where Uber pickups are not optimized). Lyber should send their cars to these areas for a higher chance of pickups.

What Else Can Benson Do For You?

Our preliminary analysis has displayed a list of the stations where Lyber can take advantage of Uber's inefficiencies. Further analysis of other competitors such as Lyft, or even bike rental stations, can help Lyber find more inefficiencies to capitalize on. Benson can do more research over a longer period of time in order to examine trends that occur such as spatial distributions or which day/time of the week is optimal. We will

be able to pinpoint trends to assist Lyber not only at the moment, but into the future. In addition, we can include more data from other sources, such as weather data, for more accurate predictions. Lastly, Benson can assist Lyber in producing a financial projection to analyze how much profit Lyber will take from pursuing this project.

Conclusion

We really enjoyed working with the MTA and Uber data and our team is excited to work with you further to explore new and exciting opportunities for Lyber to gain a competitive advantage in the ridesharing industry.