Capstone Project - The Battle of Neighborhoods

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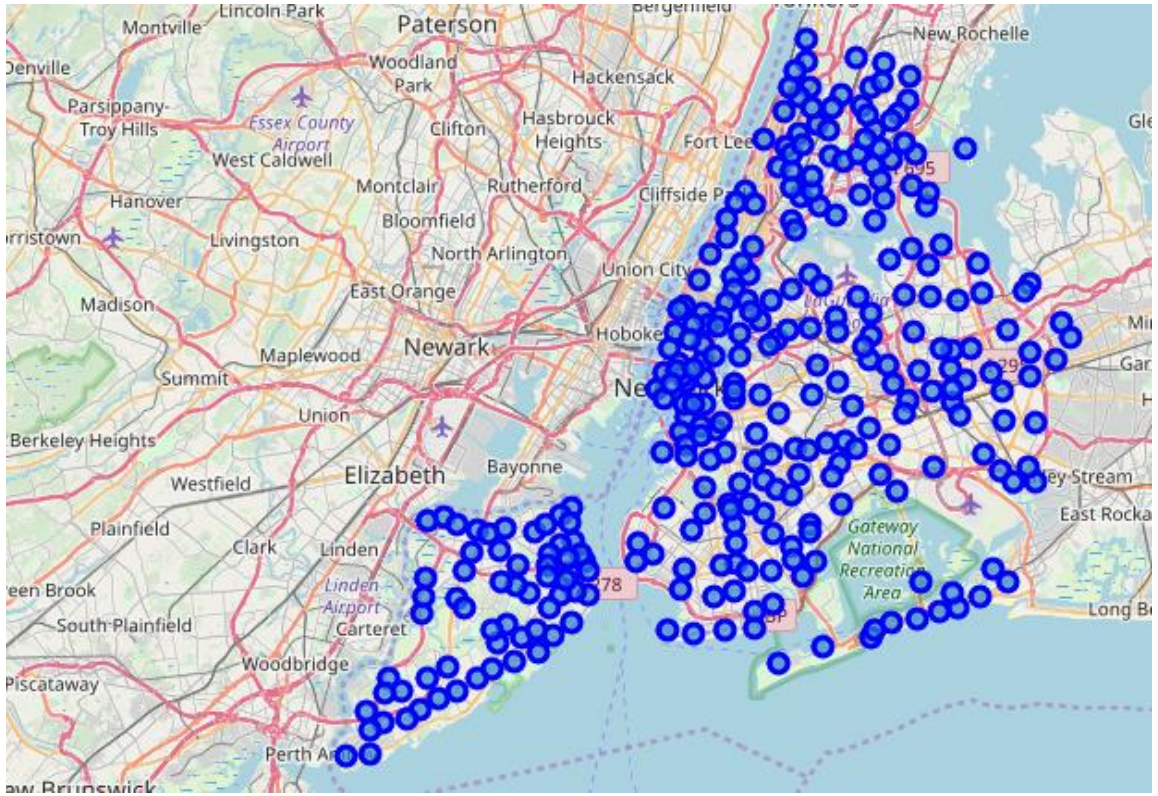
Problem Description

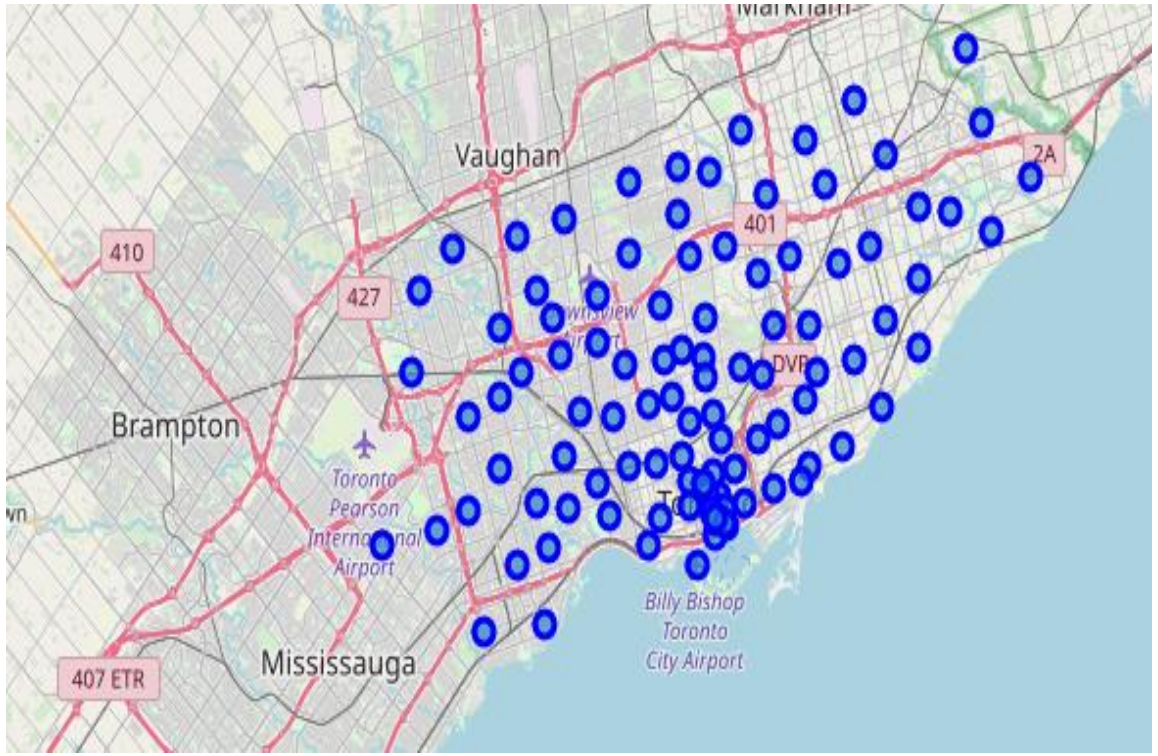
- **If any coffee company or a coffeehouse chain is planning to open a new store in New York or Toronto, where can they open the same?**
- **Which are the probable Neighborhoods in which coffee is already being sold by a non-Coffee store, but have a possibility to have a coffee store?**
- **Which coffee drinking neighborhoods in New York and Toronto are similar, so the same business model can be implemented in the other city as well?**

- **58% of Americans over the age of 18 drink coffee every single day**
- **The US alone spends $4 billion importing coffee each year**
- **The average coffee drinker spends $164.71 on coffee each year**
- **100 million people in the US drink coffee each day**
- **25% of Americans skip breakfast, yet 50% will still consume a cup of coffee in the morning**
- **Specialty coffee sales are increasing by 20% per year and account for nearly 8% of the 18 billion-dollar U.S. coffee market.**

Some Statistics to Start with



New York

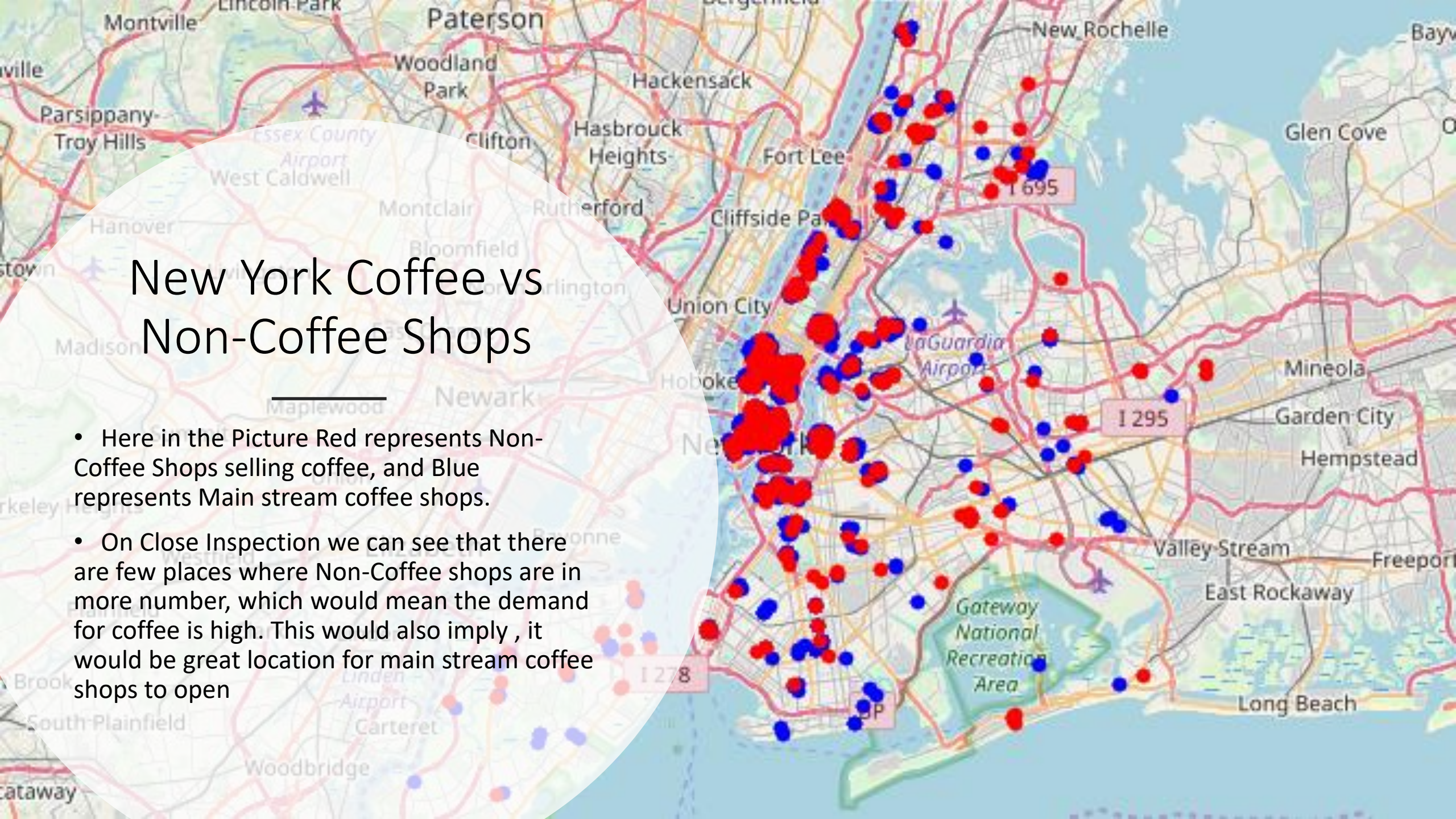


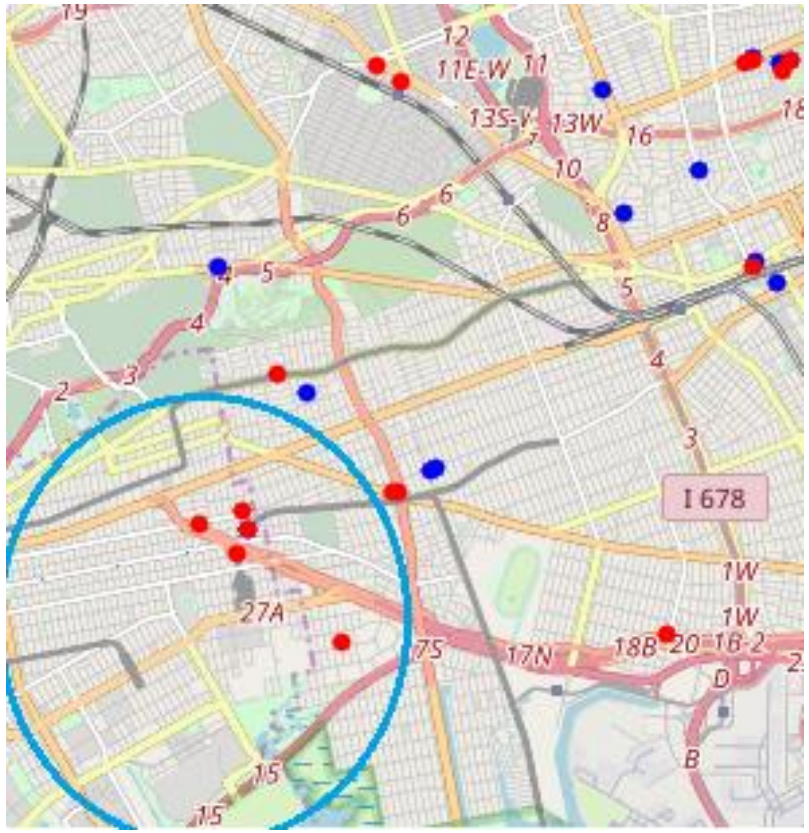
Toronto

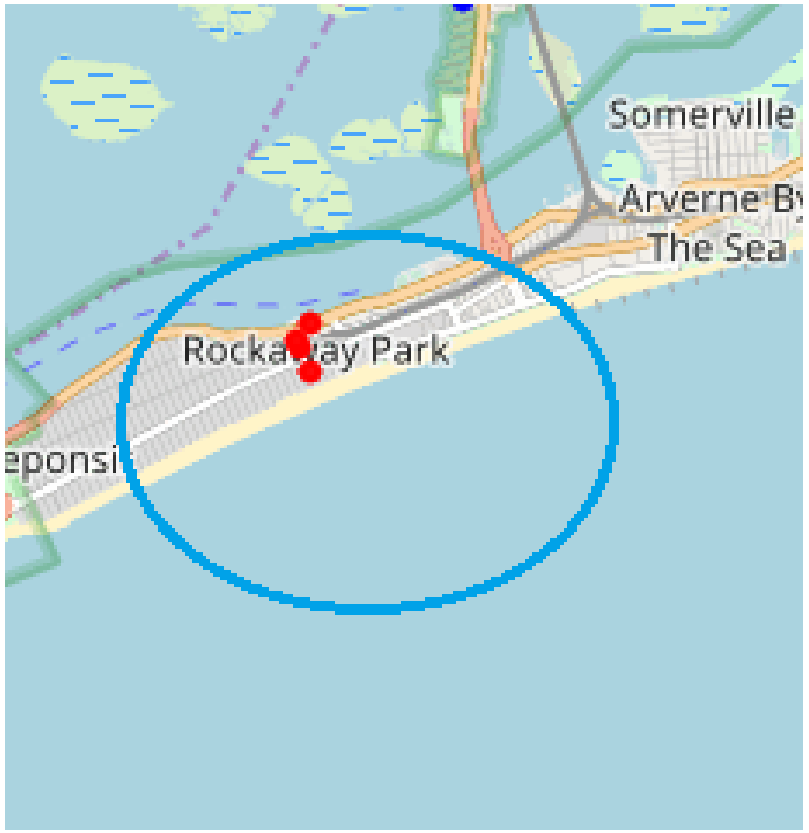
New York and Toronto Neighborhoods

New York Coffee vs Non-Coffee Shops

- Here in the Picture Red represents Non-Coffee Shops selling coffee, and Blue represents Main stream coffee shops.
- On Close Inspection we can see that there are few places where Non-Coffee shops are in more number, which would mean the demand for coffee is high. This would also imply , it would be great location for main stream coffee shops to open







New York Coffee vs Non-Coffee Shops - Continued

Few examples where the coffee shops can be opened based on inference from the clustering.

Similar Neighborhoods in New York and Toronto

- **For this problem, we had to first cluster the neighborhoods of New York and Toronto together to check which neighborhoods are more similar.**
- **Based on the clusters we can decide weather the same business model works in similar cities.**
- **Note: Here we are not taking economic factors and population into consideration. It has to be considered for the model to be accurate.**
- **We can consider 4 Clusters to start with, and use KMeans Clustering approach to solve this problem.**

Similar Neighborhood clusters

Here we can notice that , Clusters 1, 2 and 3 have similar neighborhoods in New York and Toronto, but Cluster 4 has only New York Neighborhoods

Cluster 4 Neighborhoods are not similar to any neighborhood in Toronto.

Cluster 1

Newyork	65
Toronto	26

Cluster 2

Toronto	15
Newyork	14

Cluster 3

Newyork	14
Toronto	7

Cluster 4

Newyork	31

Conclusion

- **There are similar neighborhoods in New York and Toronto based on demand for Coffee shops in both the cities, which would help business to build better profit models.**
- **By looking at the distribution of coffee and non-coffee shops , and clustering the same, we were able to make decisions on probable places for opening main stream coffee shops.**


Thank you!