

IBM Applied Data Science

Coffee Express Ltd.

Capstone Project
The Battle of Neighborhoods (Week 2)

Background

Existing Problem

Our client, Coffee Express Ltd., is an SME specializing on serving coffee and beverages including Latte, Cappuccino, Espresso and hot chocolate at Downtown Vancouver in Canada. Recently, they approach to us and express their interests in expending their branches in a city of the world's leading financial center in North America, in particular to either New York or Toronto. Both cities are the financial capitals with many skyscrapers and businessmen where the local demands of morning beverages remain high. However, it is difficult for Coffee Express Ltd. to make the decision on the best location for their expansion since they are not familiar with the demographics in both cities.

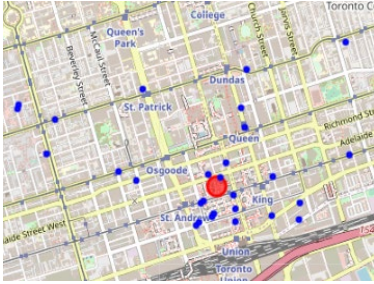
Data Description

Market Analysis

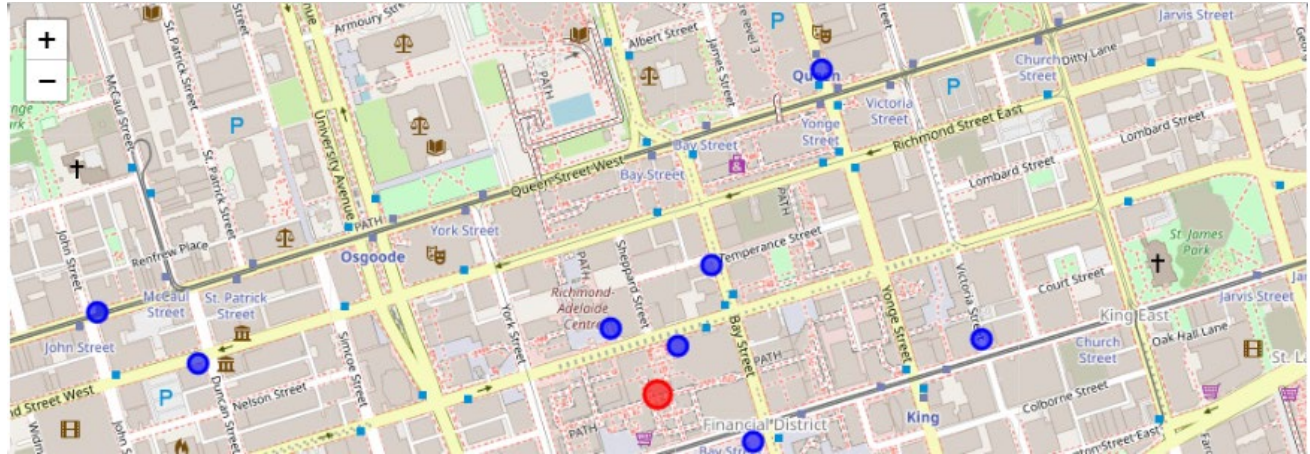
We can gather the neighborhoods data from Foursquare API and apply K-means clustering to prioritize the best coffee shop locations in either one of the cities based on the foot traffic. Finally, we can conclude the best city and location for Coffee Express Ltd. to start their expansion.

Methodologies

Competitors at Toronto financial district



- Total 8 local competitors
- Less proximity around the financial district

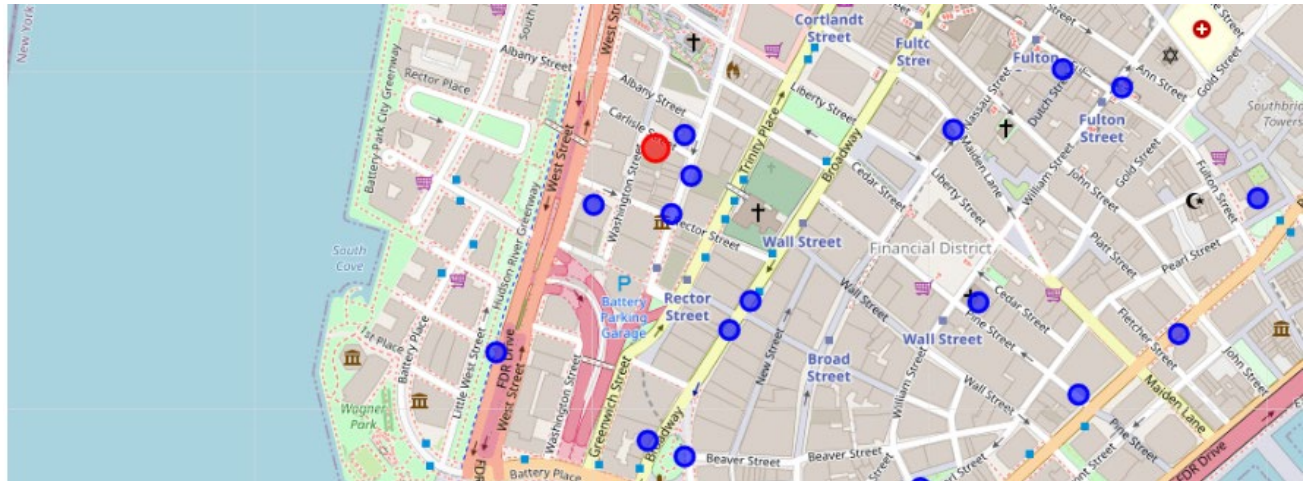


Methodologies

Competitors at New York financial district



- Total 14 local competitors
- Higher proximity around the financial district



Interpretation

With the same scale map visualization between Toronto and New York, we can interpret that the competition in New York is more intense than in Toronto. For the competitor distribution in New York, the distances between each store and our center is much shorter than in Toronto. Assuming the same foot traffic between the Toronto Financial District and World Trade Center at Manhattan, we can expect that the cafe in New York is facing relatively lower average sales per customer and lower repeat purchase rate as customers have more choices nearby in New York.

Conclusion

As we can see from the Foursquare API, the financial district in Toronto has a lower density of local competitor distribution than in New York, which indicates that our client do not have to face a vicious or cut-throat price competition with the local cafés and, thus, can focus on improving their product and service quality comparing to New York under the same resources. Therefore, we suggest Coffee Express Ltd. to start their expansion in the financial district at Toronto instead of New York.