

Battle of the Neighbourhoods

COURSERA CAPSTONE PROJECT 2020

BY PAUL TRAN



Business Problem

If you are looking to open a Chain of Cafes in Canada and sell coffee as an entrepreneur, you will be facing tough competition in a potentially saturated market. Therefore a key problem to solve is:

Where is the best place to open up your multiple Cafes?

Solving this problem gives us information and prevents opening a Cafe in a non-saturated area may provide a new business the best opportunity to thrive without competition. This is a very difficult question to solve and another issue arises:

How do we measure/determine which is the best place to start a Cafe?

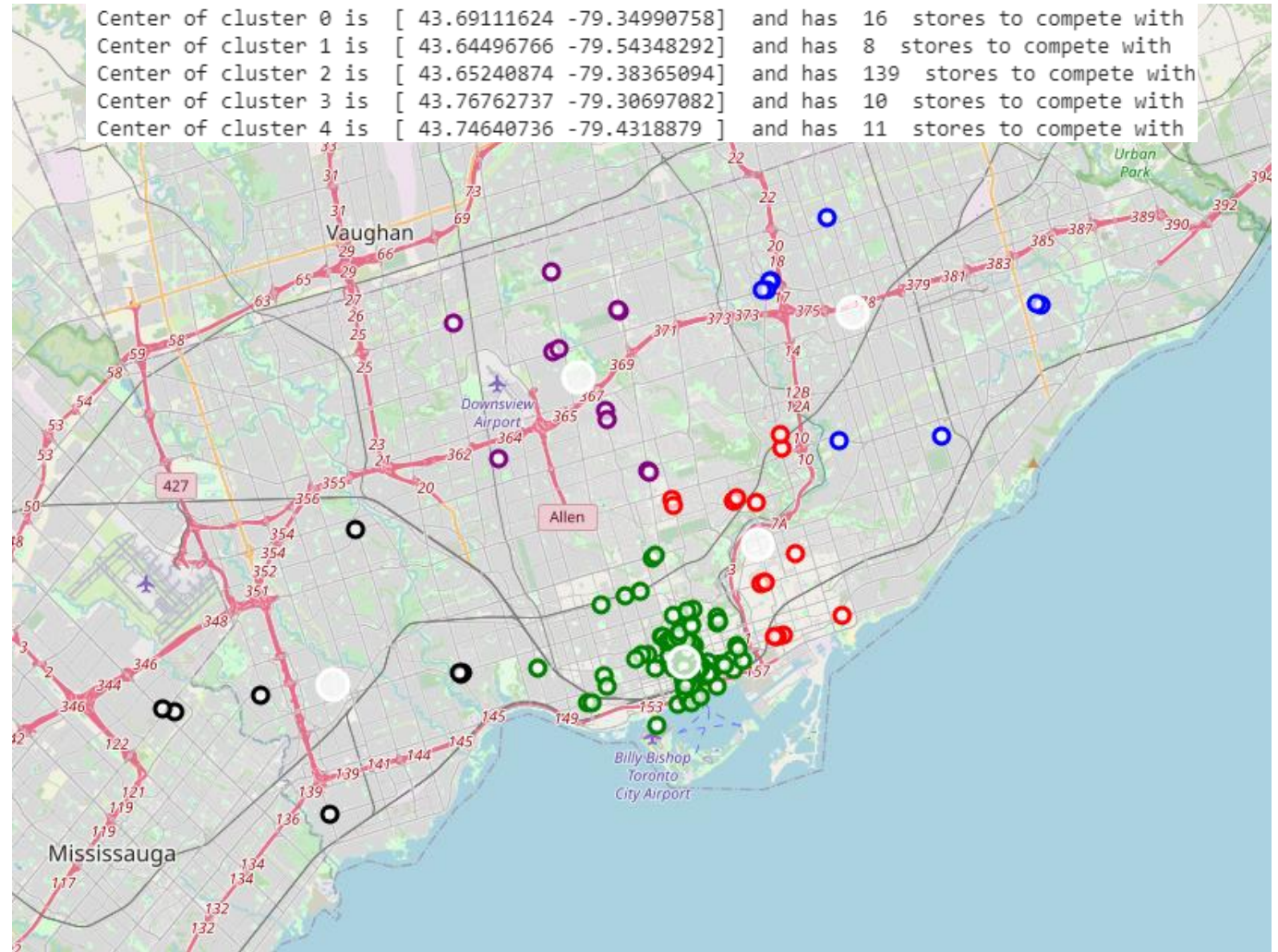
Data

To solve the problem, we will need the following data:

- List of neighbourhoods in Canada. This defines the scope of the project to the city of Sydney. This data can be sourced from web scraping Wikipedia pages and or some location data service.
- Latitude and longitude coordinates of these neighbourhoods for visualization, clustering and other purposes. This data can be sourced from location data services.
- Venue data for finding saturated neighbourhoods of Cafes. This data can be sourced from FourSquare's API.

Findings

The distribution is heavily within the city of Toronto. For our study, we specify that we are interested in opening 5 coffee shops. Therefore our K is equal to 5 for our KMeans clustering method. Once we apply this clustering method, we are given the cluster centres as well as how many shops will each of these stores be competing with within the locale.



Discussion

It is important to note that these are purely metrics that aid in the decision making of where in the city to open a Café and what competition exists there. The centre of the clusters denote just that and not where to actually open up the store as the sparsity in less dense clusters heavily effect the centroid of KMeans clustering.

There is also business strategy that may be required of whether or not it actually is a good idea to open in a less or more dense area. Some business follow the strategy of getting exposure off competition whilst others find new oceans to open up businesses where competition is low to gain a monopoly.

Unless your product is amazing, I recommend not to open a store in Toronto (green clusters) and instead open a Café chain in the red clustered location. Key landmarks may also play a role in this as previously mentioned as increased foot traffic may lead to success.