



Deciding where to open a Ramen Restaurant in Downtown Toronto

Capstone Project - The Battle of
Neighborhoods



Introduction

Toronto is the capital of the province of Ontario and is made up of many different boroughs

One of the most diverse and populated cities in Canada with a population of 6.2M

Foreign-born people account for nearly half the population

Business Proposition

A client wishes to open up a ramen restaurant in Downtown Toronto which is encompasses the southern regions of Old Toronto. Downtown is made up of many smaller neighborhoods including St. James Town, Regent Park, Queen's Park, and so forth. We have been tasked to research a suitable location for our client's ramen restaurant.

Goal: To come up with a suitable location for a ramen restaurant

Business Understanding

The following factors should be considered:

1. Where should this business be located?
 - Are entertainment and food venues popular in this area?
2. What is the competition make-up for this area?
 - Will the restaurant stand out or blend into obscurity?

Generalizing: Ramen can still be served in venues considered not to be Ramen Restaurants. We might be able to assume that Ramen is being served in Japanese Restaurants or Asian Restaurants that have a wide range of Asian Cuisine.

Data

Source:

https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

	Postal Code	Borough	Neighbourhood	Latitude	Longitude
0	M5A	Downtown Toronto	Regent Park, Harbourfront	43.654260	-79.360636
1	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government	43.662301	-79.389494
2	M5B	Downtown Toronto	Garden District, Ryerson	43.657162	-79.378937
3	M5C	Downtown Toronto	St. James Town	43.651494	-79.375418
4	M5E	Downtown Toronto	Berczy Park	43.644771	-79.373306
5	M5G	Downtown Toronto	Central Bay Street	43.657952	-79.387383
6	M6G	Downtown Toronto	Christie	43.669542	-79.422564
7	M5H	Downtown Toronto	Richmond, Adelaide, King	43.650571	-79.384568
8	M5J	Downtown Toronto	Harbourfront East, Union Station, Toronto Islands	43.640816	-79.381752
9	M5K	Downtown Toronto	Toronto Dominion Centre, Design Exchange	43.647177	-79.381576
10	M5L	Downtown Toronto	Commerce Court, Victoria Hotel	43.648198	-79.379817
11	M5S	Downtown Toronto	University of Toronto, Harbord	43.662696	-79.400049
12	M5T	Downtown Toronto	Kensington Market, Chinatown, Grange Park	43.653206	-79.400049
13	M5V	Downtown Toronto	CN Tower, King and Spadina, Railway Lands, Har...	43.628947	-79.394420
14	M4W	Downtown Toronto	Rosedale	43.679563	-79.377529
15	M5W	Downtown Toronto	Stn A PO Boxes	43.646435	-79.374846
16	M4X	Downtown Toronto	St. James Town, Cabbagetown	43.667967	-79.367675
17	M5X	Downtown Toronto	First Canadian Place, Underground city	43.648429	-79.382280
18	M4Y	Downtown Toronto	Church and Wellesley	43.665860	-79.383160

Data

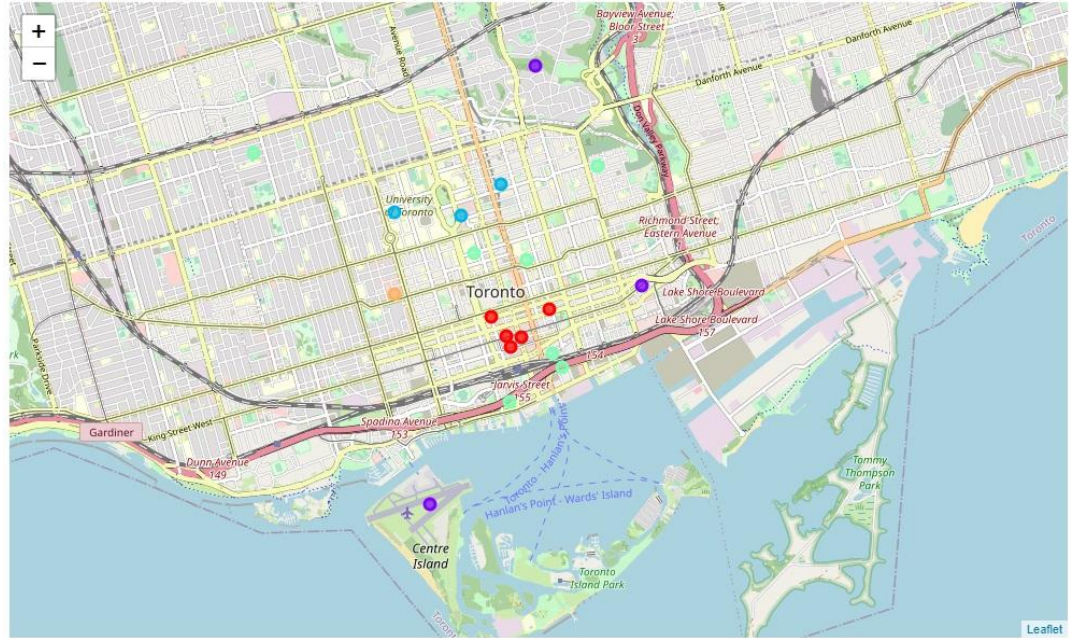
Cluster 1: Red

Cluster 2: Purple

Cluster 3: Blue

Cluster 4: Green

Cluster 5: Yellow



Methodology

Data Collection and Cleaning:

Toronto boroughs and neighborhoods information were webscraped from https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M using the BeautifulSoup library and were inputted into a Pandas dataframe for wrangling and cleaning.

We filtered the data to narrow down information specifically regarding Downtown Toronto. To get our coordinates, we used an existing geospatial csv file to obtain our lat/long values.

Finally, we used Foursquare API to locate existing venues located around neighborhoods and filtered our results to look at restaurants.

Visualization:

Folium was used to plot our K-Means clustered restaurants on a map

K-Means Method:

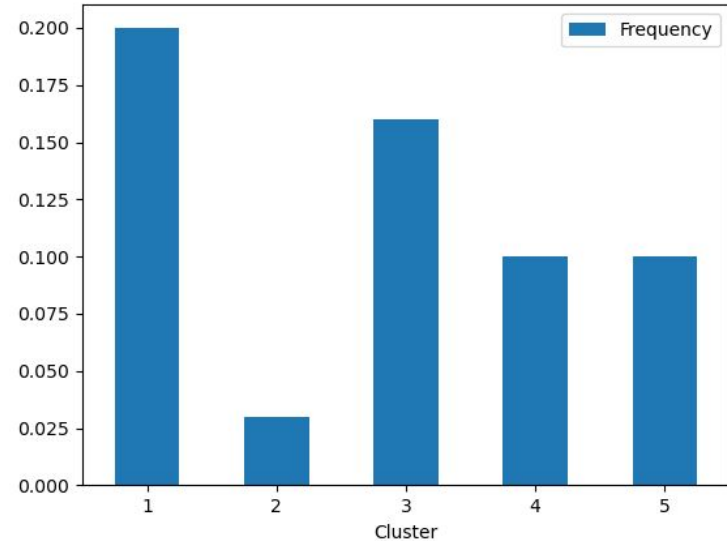
We used K-Means to cluster neighborhoods by most common restaurant types

Results

We used the K-Means method to group neighborhoods into clusters according to restaurant types.

When we examine the prevalence of 'Ramen Restaurant', 'Japanese Restaurant', and 'Asian Restaurant' in the top 10 common venue for each cluster, we see the most prevalence in clusters 1 and 3.

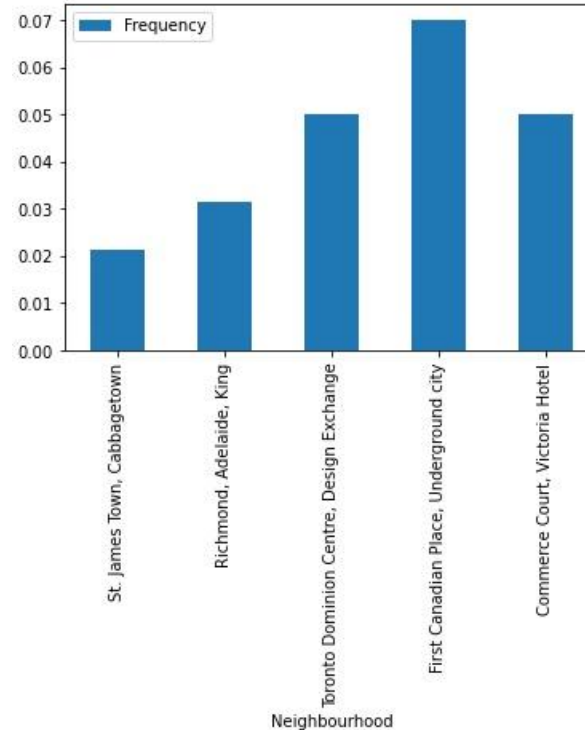
Prevalence of Ramen related Restaurants



Results Continued

After narrowing down the greatest frequency to cluster 1, we can examine the frequencies to neighborhoods in that specific cluster to find that First Canadian Place/Underground City has the greatest number of related restaurants.

Prevalence of Ramen related Restaurants in Cluster 1



Discussion

Our data research has given us an idea of where we can start to place a venue for our client's Ramen Restaurant. However, more data can always be provided to give a better educated probability for success. One thing that this research has neglected was the actual count for population diversity. Instead we have opted to focus on already existing venue types for grounds of research. Existing venues can be used to project levels of success for future venues of those types under the assumption that they are able to still exist as a business.

Conclusion

We are concluding that the best place for our client to open their Ramen Restaurant would be around Cluster 1 (Red Neighborhoods).

More specifically, the best place would be First Canadian Place/Underground City where such businesses have been able to persist in their communities.

