Best Location Turkish Restaurant in Toronto

Section 1 – Introduction

Tourism sees on annual basis almost 27.5m tourist. An attractive destination for all types of tourist offering loads of attractions, parks, music and event.
- Tourist spend on average 6.5B dollars
- 6.4B dollars in hotels booking
- An overall impact of 10.3B dollar.
- Accommodation, food, drink and performing arts contribute 70% of all tourism activities

Objective
The exercise is to try and identify a location / zone to establish a Turkish restaurant around Ontario, Toronto, targeting tourist & business customers.

Location:
Scarborough is known for its diverse cultural landscape and proximity to tourist locations.

Foursquare API:
Primary data source for this exercise will be sourced from Four Square. Which will cover the 4 main categories accommodation, food, drink and performance arts

Section 2 - Data Section

To be able to determine the ideal location for opening a Turkish restaurant, i will explore the area for various types of venues and compare them with respect to business zone and tourist attractions. capturing venue name, location, venue categories. The data collected will then be used to create hot zones and identify the best zone for an investment.

List of data to be collected from Foursquare would include but not limited to (in addition to the data already sourced from wikipedia and geo

- Venue Name
- Venue location (Longitude / Latitude)
- Venue Category (targeting: accommodation, food, drink and arts mainly)
- Neighborhood name
- Neighborhood location (Longitude / Latitude)

data source:
1. Data on Toronto - https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M
2. Geolocation data - https://cocl.us/Geospatial_data
3. Venue data - www.foursquare.com

Section 3 – Methodology

Now that I have the data structured and identified venue data by neighborhood using Foursquare.

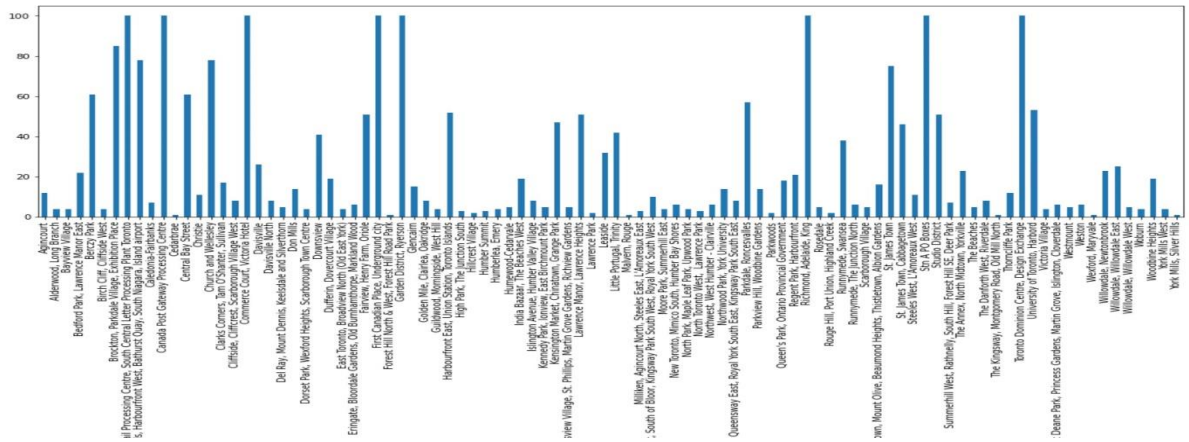
- Total of 96 Neighborhoods
- Containing 260 unique Venue Categories

I will now examine the neighborhoods and identify the number of Turkish restaurants per neighborhood.

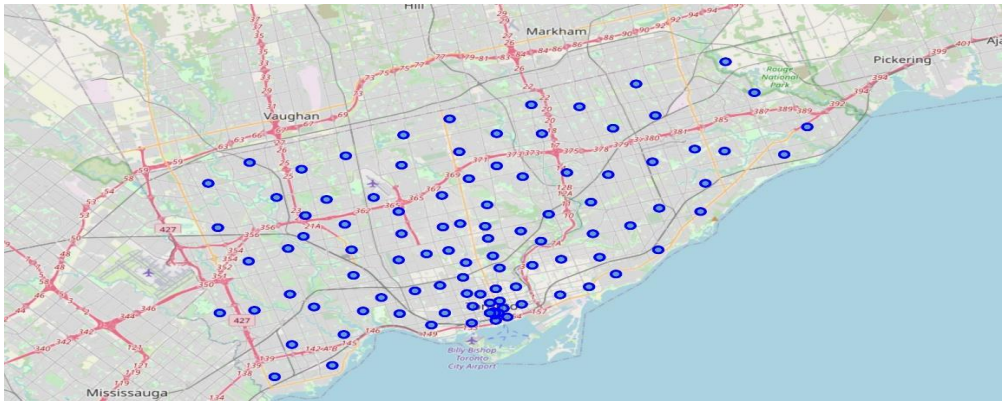
I will achieve this by clustering venue category in each neighborhood. I will then proceed to determine the optimal clusters, accordingly proceed to determine the spread of the clusters based neighborhoods across Toronto.

After having determined the clusters, i will propose based on cluster density, cluster size and number of restaurants the ideal cluster to focus on to establish the Turkish restaurant

# of Venues per neighborhood



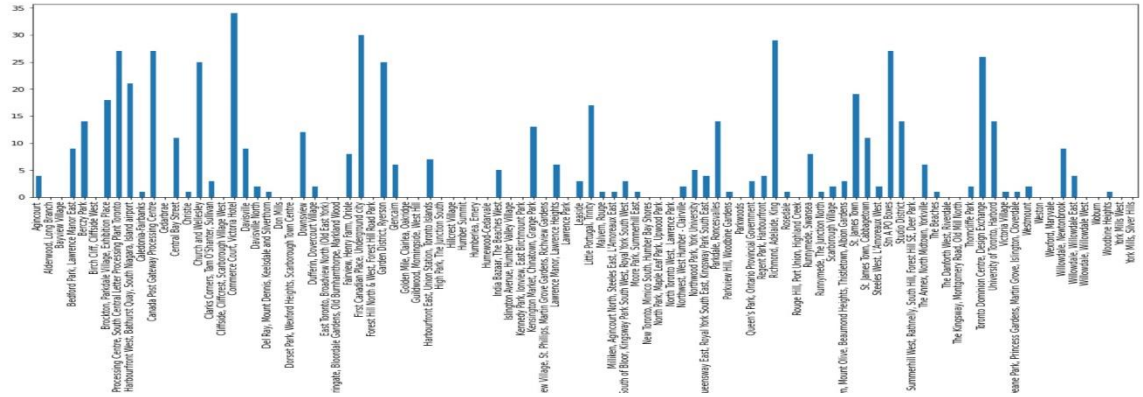
Neighborhoods in Toronto



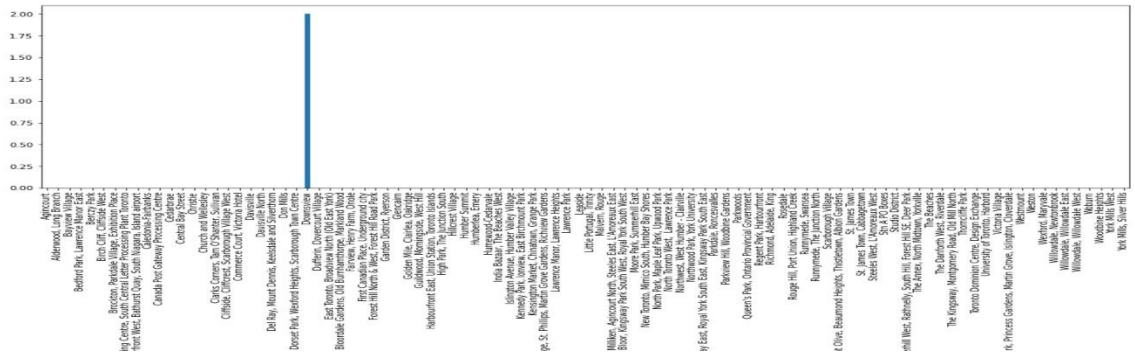
Section 4 – Results

Objective of the exercise was to determine an area to start a new Turkish restaurant. Cluster 0 mainly consisting of neighborhoods around downtown seems to be the ideal location.

# of Restaurants per neighborhood



# of Turkish restaurants per neighborhood



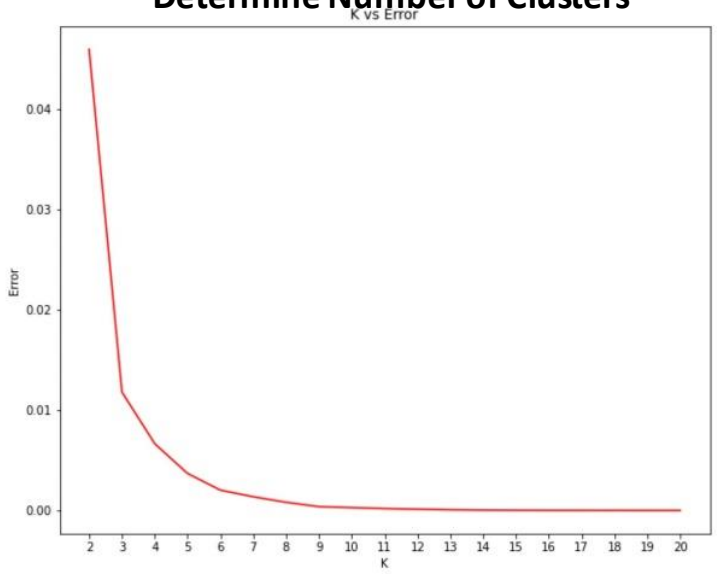
Having seen that the number of Turkish restaurants is just 2 across all of Toronto, this poses as a good opportunity to open a new outlet. As the data is insufficient to determine a good location, we will work with all types of restaurants to determine a hot spot for establishment

Based on grouping of data, I determined the number of clusters as shown in figure below. Optimal number of cluster equal to 3

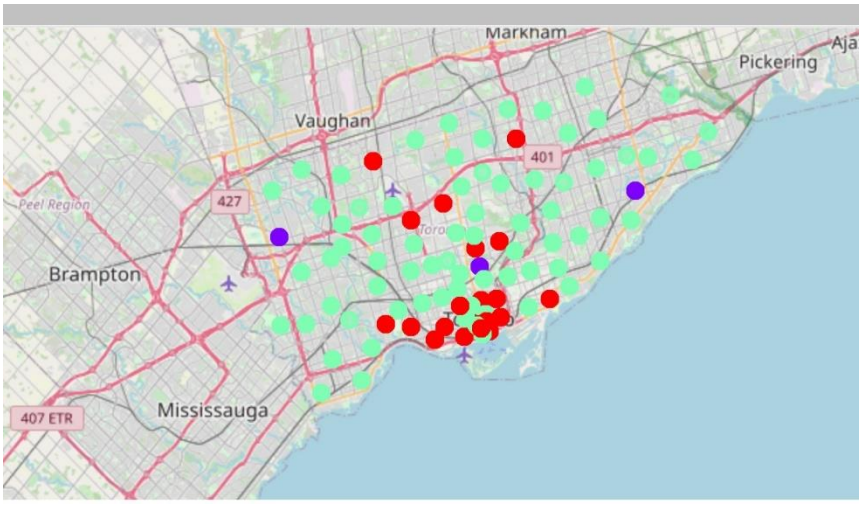
Created the cluster map which reflect the spread of each group across Toronto

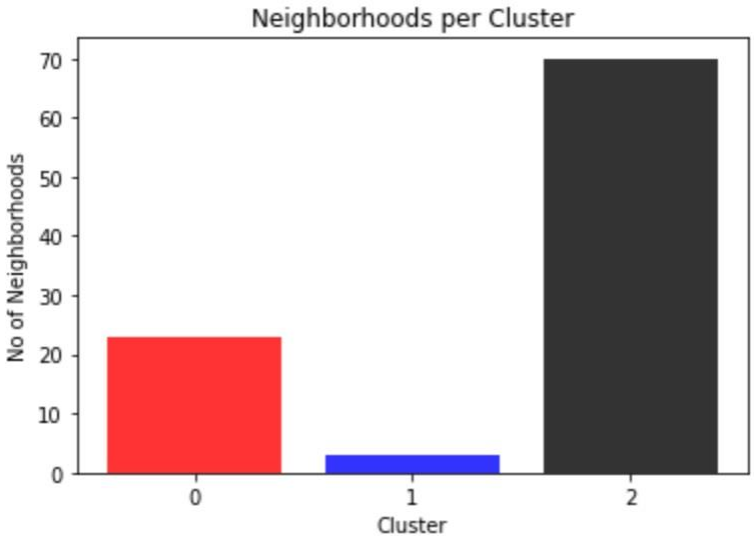
It was clear from both the map and the number of neighborhoods per cluster that cluster zero seemed like the optimal cluster

Determine Number of Clusters



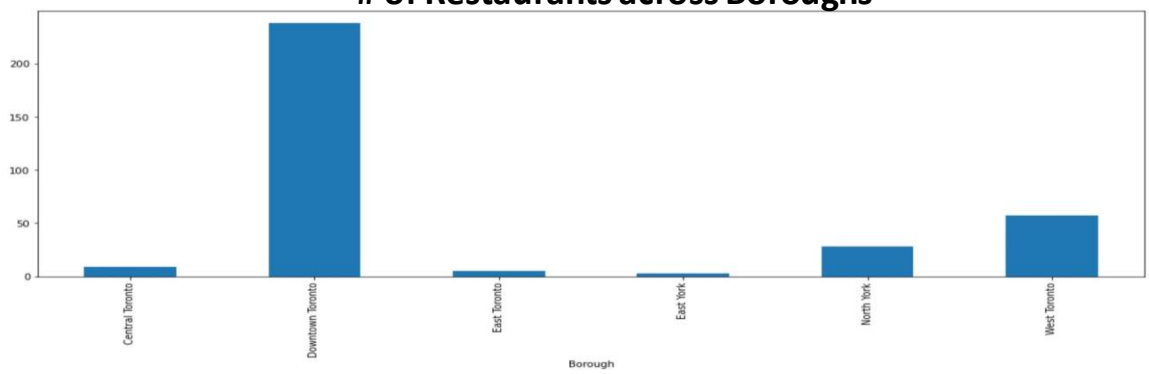
Clusters across Toronto



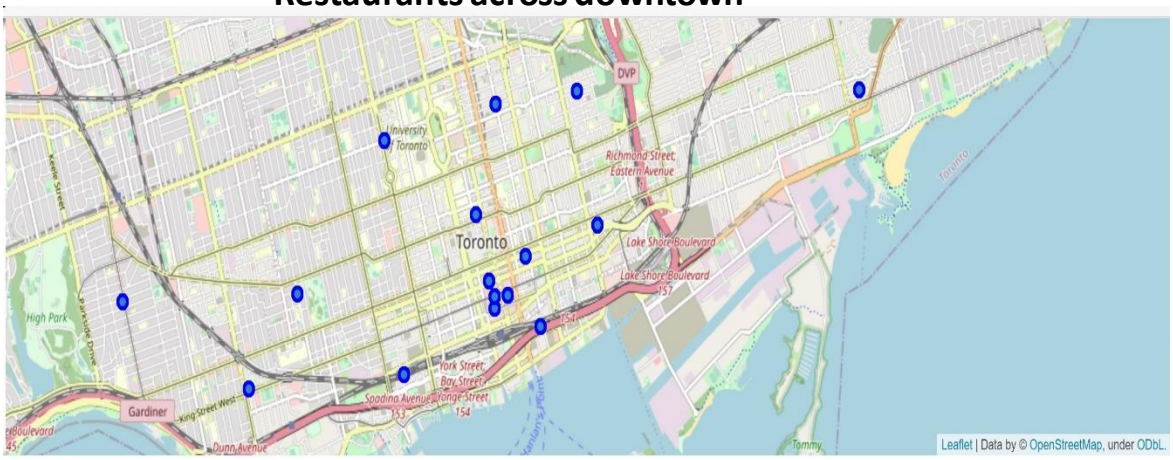


- Further investigate cluster zero, it clearly reflected downtown had the maximum number of restaurants equal 238
- No Turkish restaurants
- On average each neighborhood contains 15 restaurants
- Cluster contains a good mix of neighborhoods catering for business, tourism and Food.

# of Restaurants across Boroughs



Restaurants across downtown



Section 5 – Discussion

Data model was built as tool to determine the best location for a Turkish restaurant

The data model is good as the source of the data;

- Foursquare was the only source of venue data and could be limited, exercise could be continued with further inputs to determine if there are any other Turkish restaurants in cluster Zero

- Additional tourism data can be integrated to determine number of Turkish tourist/residents in Toronto to further enhance data model

Section 6 – Conclusion

Exercise was successfully completed based on factual data collected from various sources, using tools such as

- beautiful soup
- Pandas
- numpy
- matplotlib
- Follium

Using the tools I structured the data and used various graphs / clustering methodologies to determine the best location for a Turkish restaurant.

I am confident based on the model created anyone who wishes to establish Turkish restaurant in Toronto downtown area will be successful in the venture.