

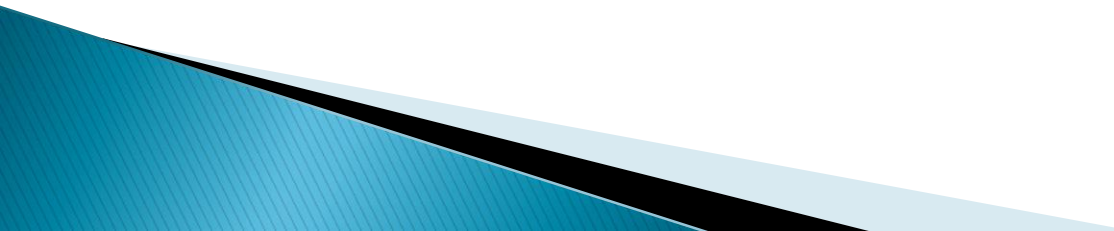
Exploring the Cuisine of Toronto

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Introduction

- ▶ Food tourism is a growing industry in Toronto.
 - ▶ The goal of this project is to give tourists an idea of where a large number of restaurants catering to a given cuisine.
 - ▶ It can also be used by food tourism companies to market specific city neighbourhoods to these tourists.
 - ▶ I will suggest the path that food tours can take to most efficiently taste all Toronto has to offer.
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Data acquisition

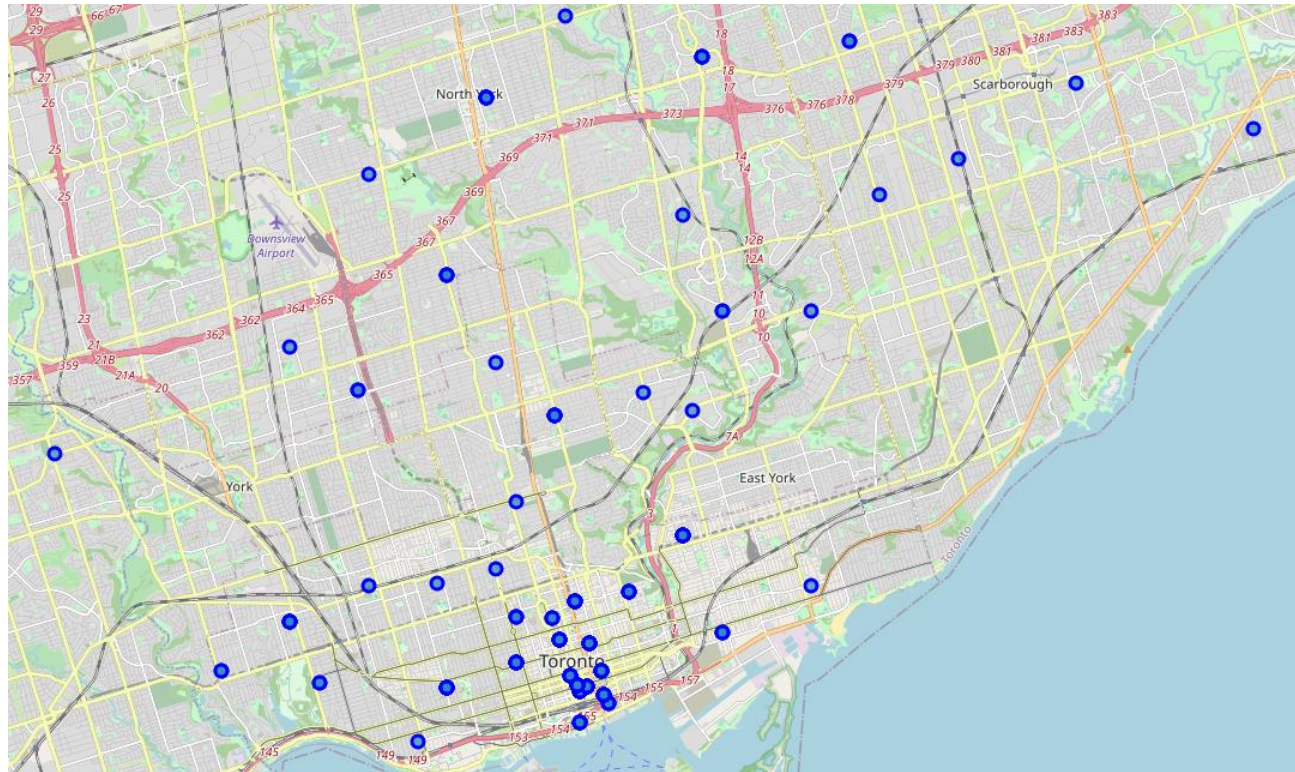
- ▶ I will use Foursquare data to profile the restaurants that can be found in Toronto.
- ▶ There are approximately 270 types of venues listed in the Toronto, though not all of these will be included in the scope of this project.
- ▶ Postal codes and neighbourhood names in Toronto will be scraped from Wikipedia.
- ▶ Spatial data will be taken from http://cocl.us/Geospatial_data

Data cleaning

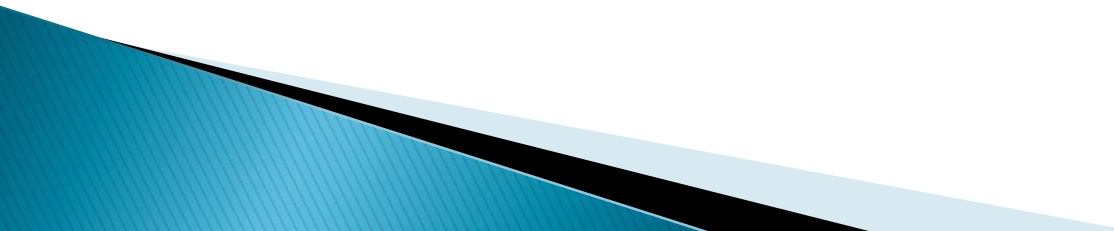
- ▶ I identify neighbourhoods that contain at least one of the following restaurant types:
 - ▶ Portuguese Restaurant
 - ▶ Italian Restaurant
 - ▶ Ramen Restaurant
 - ▶ Thai Restaurant
 - ▶ Modern European Restaurant
 - ▶ Middle Eastern Restaurant
 - ▶ Ethiopian Restaurant
 - ▶ Asian Restaurant
 - ▶ Korean Restaurant
 - ▶ Colombian Restaurant
 - ▶ Greek Restaurant
 - ▶ Tibetan Restaurant
 - ▶ Vietnamese Restaurant
 - ▶ Mexican Restaurant
 - ▶ Japanese Restaurant
 - ▶ German Restaurant
 - ▶ Irish Pub
 - ▶ Belgian Restaurant
 - ▶ Cuban Restaurant
 - ▶ Filipino Restaurant
 - ▶ Taiwanese Restaurant

Exploration of Neighbourhood data

- ▶ Identified here are the 47 Toronto neighbourhoods with at least one restaurant in scope

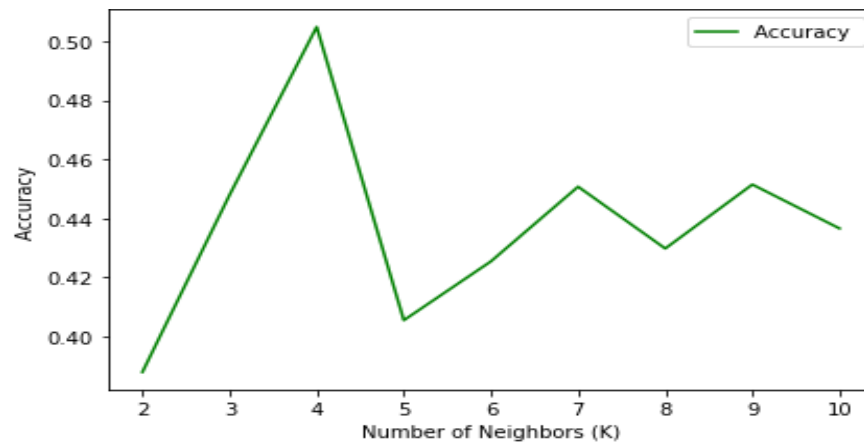
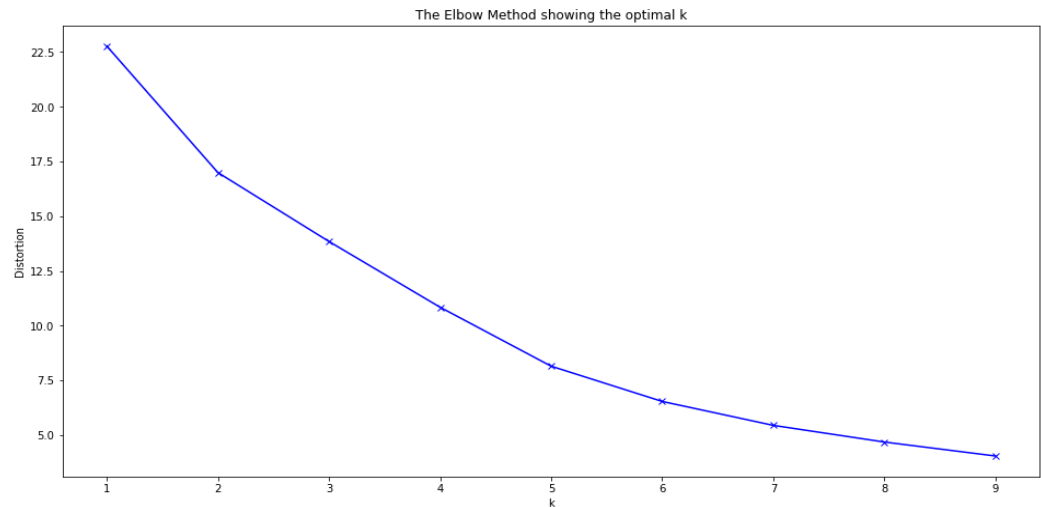


Clustering of Neighbourhood data

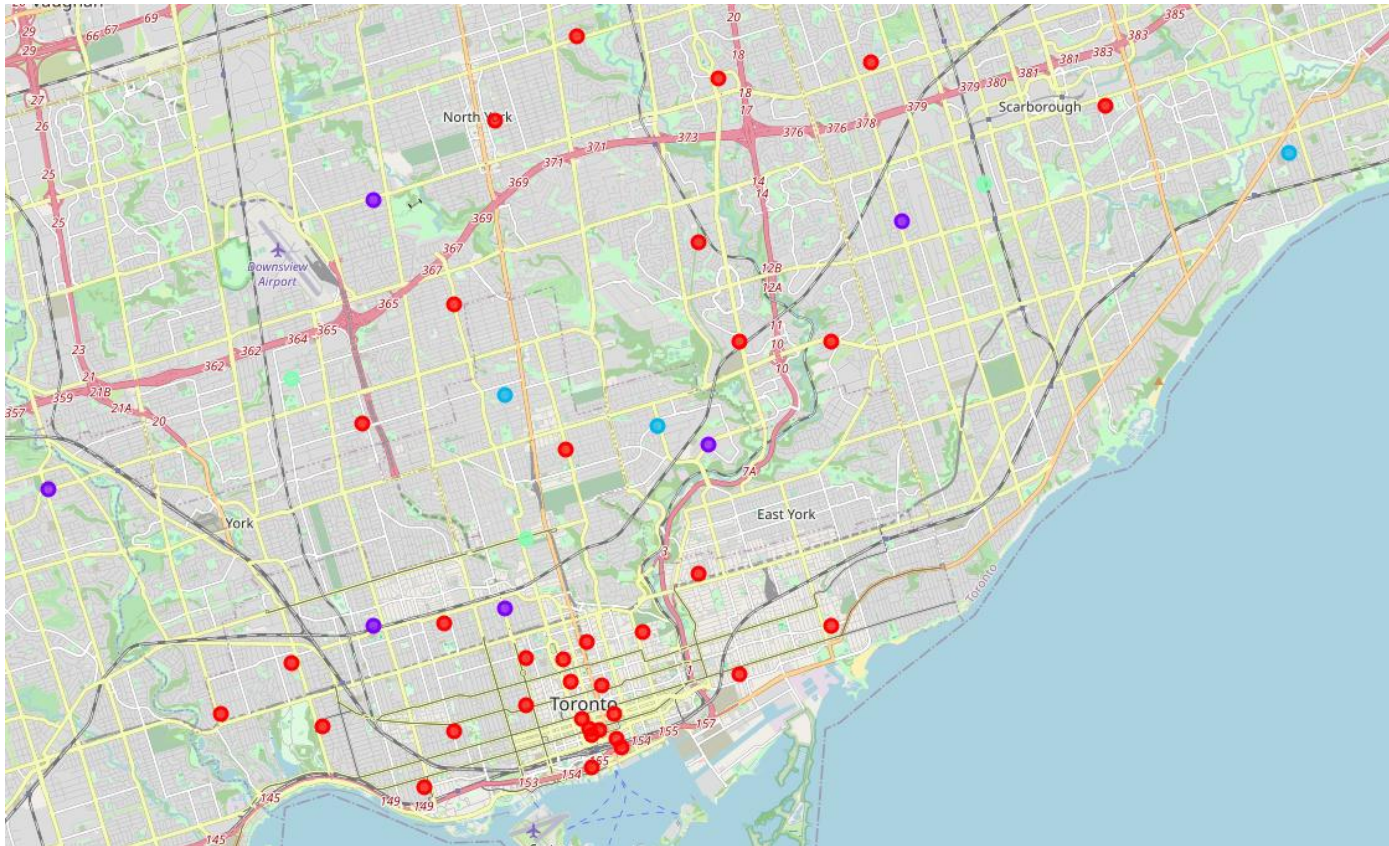
- ▶ I reformatted the data so that each neighbourhood was analysed to identify the proportion in which each type of restaurant appears.
 - ▶ For each neighbourhood I then identified the top 10 most common venues. This is the basis on which I chose to cluster the neighbourhoods.
 - ▶ I chose to cluster the neighbourhoods using k-means clustering.
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Choice of k for k-means clustering

- Based on the elbow and silhouette methods, I chose to cluster the neighbourhoods into 4 clusters



Neighbourhood Clustering



Cluster	Colour	Name
0	Red	Melting Pot Cluster
1	Purple	Middle Eastern Cluster
2	Blue	Mexican Cluster
3	Green	Asian Cluster

Analysis of 4 clusters

Cluster	Colour	Name	Description
0	Red	Melting Pot Cluster	The 'Melting Pot' Cluster is characterised by a broad variety of restaurant choices – Japanese, Italian, Asian, Thai etc. It is the most varied of the clusters.
1	Purple	Middle Eastern Cluster	The 'Middle Eastern' Cluster is characterised by its high concentration of Middle Eastern Restaurants, but it also has a high proportion of Asian and Korean restaurants. It is the only one of the clusters to boast such a high concentration of Middle Eastern restaurants.
2	Blue	Mexican Cluster	The 'Mexican' Cluster is characterised by its high concentration of Mexican Restaurants. It this name because it is the only one of the clusters to boast such a high concentration of Mexican restaurants.
3	Green	Asian Cluster	The top 6 most common restaurants are all based around Asian cuisine, with Vietnamese, Korean and Tibetan restaurants featuring prominently.

Most Efficient Path through all 4 Clusters

- ▶ I found the most efficient route to visit all four clusters is, in order:

1. The Annex, North Midtown, Yorkville
2. Summerhill West, Rathnelly, South Hill, Forest Hill SE, and Deer Park
3. Davisville
4. North Toronto West



Final Observations

- ▶ This report can be used to experience as diverse a range of cuisines as Toronto has to offer.
 - ▶ The most efficient way to visit all four clusters is outlined. This can be used by food tourism companies and tourists.
 - ▶ The analysis of each of the clusters can also be used to know what restaurants are prominently available in each neighbourhood, allowing tourists to plan their meals while staying in Toronto.
 - ▶ If a tourist is taking a day trip to Toronto and wants to experience the wider variety of cuisine with little hassle, then a 'Melting Pot' cluster allows them to experience this with minimal travel.
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