Introduction

When starting a new restaurants, first thing one needs to explore the prospective locations. The location should be chosen in such a way that it attracts the customers and provide less competition with similar restaurants. This can be achieved by segmenting the neighborhood on the basis of the similarities of the locations and clustering the locations on the basis of the competition with other Indian restaurants.

Problem Statement

Given the location data of the neighborhood of the Toronto, Canada, one would like to cluster the similar neighborhoods according to the frequency of Indian restaurants and on the basis of analysis we would like to recommend best neighborhoods to start a new Indian restaurant.

Data

To solve this problem, I will need below data:

- List of neighborhoods in Toronto, Canada.
  "https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M"
- Latitude and Longitude of these neighborhoods.
- Venue data related to Indian restaurants. This will help us find the neighborhoods that are most suitable to open a Indian restaurant.

Extracting the data

- Scrapping of Toronto neighborhoods via Wikipedia
- Getting Latitude and Longitude data of these neighborhoods via Geocoder package
- Using Foursquare API to get venue data related to these neighborhoods.

	Postal code	Borough	Neighborhood	Latitude	Longitude
0	M1B	Scarborough	Malvern , Rouge	43.8067	-79.1944
1	M1C	Scarborough	Rouge Hill , Port Union , Highland Creek	43.7845	-79.1605
2	M1E	Scarborough	Guildwood , Morningside , West Hill	43.7636	-79.1887
3	M1G	Scarborough	Woburn	43.771	-79.2169
4	M1H	Scarborough	Cedarbrae	43.7731	-79.2395
5	M1J	Scarborough	Scarborough Village	43.7447	-79.2395
6	M1K	Scarborough	Kennedy Park , Ionview , East Birchmount Park	43.7279	-79.262
7	M1L	Scarborough	Golden Mile , Clairlea , Oakridge	43.7111	-79.2846
8	M1M	Scarborough	Cliffside , Cliffcrest , Scarborough Village West	43.7163	-79.2395
9	M1N	Scarborough	Birch Cliff , Cliffside West	43.6927	-79.2648
10	M1P	Scarborough	Dorset Park , Wexford Heights , Scarborough To...	43.7574	-79.2733
11	M1R	Scarborough	Wexford , Maryvale	43.7501	-79.2958
12	M1S	Scarborough	Agincourt	43.7942	-79.262
13	M1T	Scarborough	Clarks Corners , Tam O'Shanter , Sullivan	43.7816	-79.3043
14	M1V	Scarborough	Milliken , Agincourt North , Steeles East , L'...	43.8153	-79.2846
15	M1W	Scarborough	Steeles West , L'Amoreaux West	43.7995	-79.3184
16	M1X	Scarborough	Upper Rouge	43.8361	-79.2056

Figure 1: Final DataFrame after adding neighborhoods, postal codes and their respective neighborhoods