

Battle of Neighborhoods

Our client wants a good neighborhood to relocate in North York in Toronto city

- In order to select a good place to relocate, we need to visualize the map of city along with its neighborhoods.
- For each of these neighborhoods, we need to get the most common venues present in it.
- Based on common venues, we were able to decide, which is best for a family to live in based on their requirements.

Data Acquisition and Cleaning

- All the boroughs and neighborhoods data of Toronto city came from wiki page https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M. From this link, web scraping should be done to get the data in required format. Here, unnecessary columns and rows were dropped.
- Latitudes and Longitudes of these neighborhoods data from https://cocl.us/Geospatial_data%5D. This csv file and above formatted data needs to be merged to get the structured form of data for analysis.
- Using Foursquare API, we can display the map of Toronto city along with its neighborhoods based on above latitude and longitude coordinates.

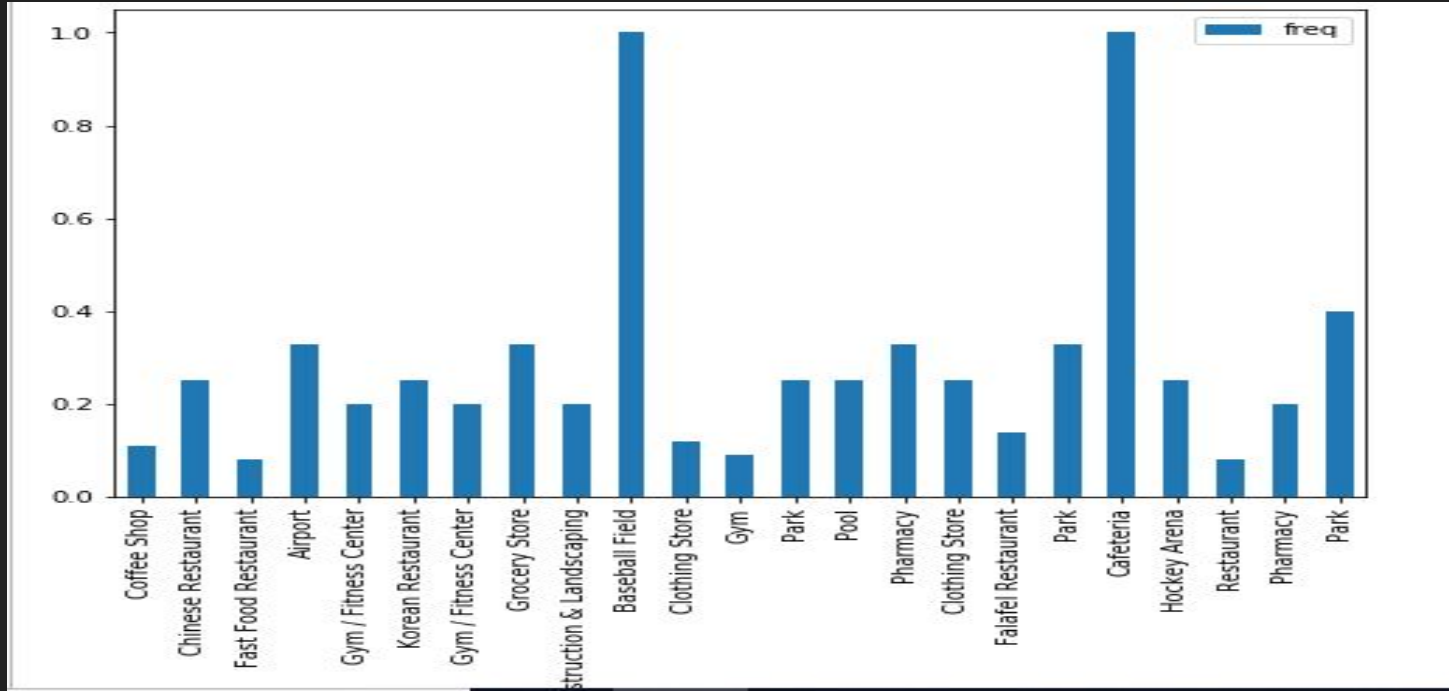
This is the structured form of our cleaned data with top 5 rows for doing analysis

	Borough	Neighbourhood	Latitude	Longitude
0	Scarborough	Rouge,Malvern	43.806686	-79.194353
1	Scarborough	Highland Creek,Rouge Hill,Port Union	43.784535	-79.160497
2	Scarborough	Guildwood,Morningside,West Hill	43.763573	-79.188711
3	Scarborough	Woburn	43.770992	-79.216917
4	Scarborough	Cedarbrae	43.773136	-79.239476

Getting only required borough from our dataset

- As we need only North York borough in Toronto city, we will extract that data.
- Then, we analyse each neighborhood in it.
- For each neighborhood, we get most common venues within the radius of 500 metres.
- Then we can analyse these venues occurrence in neighborhood

Bar chart showing all the 1st most common venues in each neighborhood



This is one cluster formed from KMeans clustering algorithm

	Neighbourhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
3	Silver Hills, York Mills	Cafeteria	Women's Store	Coffee Shop	Construction & Landscaping	Convenience Store	Cosmetics Shop	Cupcake Shop	Deli / Bodega	Department Store	Dessert Shop

This is one cluster formed

Neighbourhood		1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
23	Emery, Humberlea	Baseball Field	Women's Store	Electronics Store	Construction & Landscaping	Convenience Store	Cosmetics Shop	Cupcake Shop	Deli / Bodega	Department Store	Dessert Shop

Conclusion and Discussions

- Neighborhoods Fairview, Henry Farm, Oriole are suitable for those who are interested in shopping as it is having more number of clothing,kids, toys stores and also having metro station for good accessibility
- For those who interested in pubs, they can choose for Glencairn neighborhood
- Lawrence heights, Lawrence Manor is suitable for family as they are having good amount of house related stuff.
- Based on requirements of our client, he can choose any of above mentioned neighborhoods