

Battles of Neighborhood

Capstone Coursera project

Introduction and business idea

- The purpose of this project is to help people in exploring better facilities in & around their neighborhoods. It will help them to select their preferred living areas out of all the neighborhoods in Scarborough, Toronto.
- Scarborough is a popular place for migrating. It takes time to do research in house prices or school rating.
- This Project aims to create an analysis of features for people migrating to Scarborough to search best neighborhoods by comparing neighborhoods with each other. The features include median housing prices and schools according to ratings, crime rates of that area, road

Data Required

- Data Link: https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

Dataset consists of latitude and longitude, zip codes.

- We will need data about different venues in different neighborhoods of that specific borough. In order to gain that information we will use "Foursquare" locational information. Foursquare is a location data provider with information about all manner of venues and events within an area of interest. Such information includes venue names, locations, menus and even photos. As such, the foursquare location platform will be used as the sole data source since all the stated required information can be obtained through the API.
- After finding the list of neighborhoods, we then connect to the Foursquare API to gather information about venues inside each and every neighborhood. For each neighborhood, we have chosen the radius to be 100 meter.
- The data retrieved from Foursquare contained information of venues within a specified distance of the longitude and latitude of the postcodes. The information obtained per venue as follow
 1. Neighborhood
 2. Neighborhood Latitude
 3. Neighborhood Longitude
 4. Venue
 5. Name of the venue e.g. the name of a store or restaurant
 6. Venue Latitude
 7. Venue Longitude
 8. Venue Category

Methodology

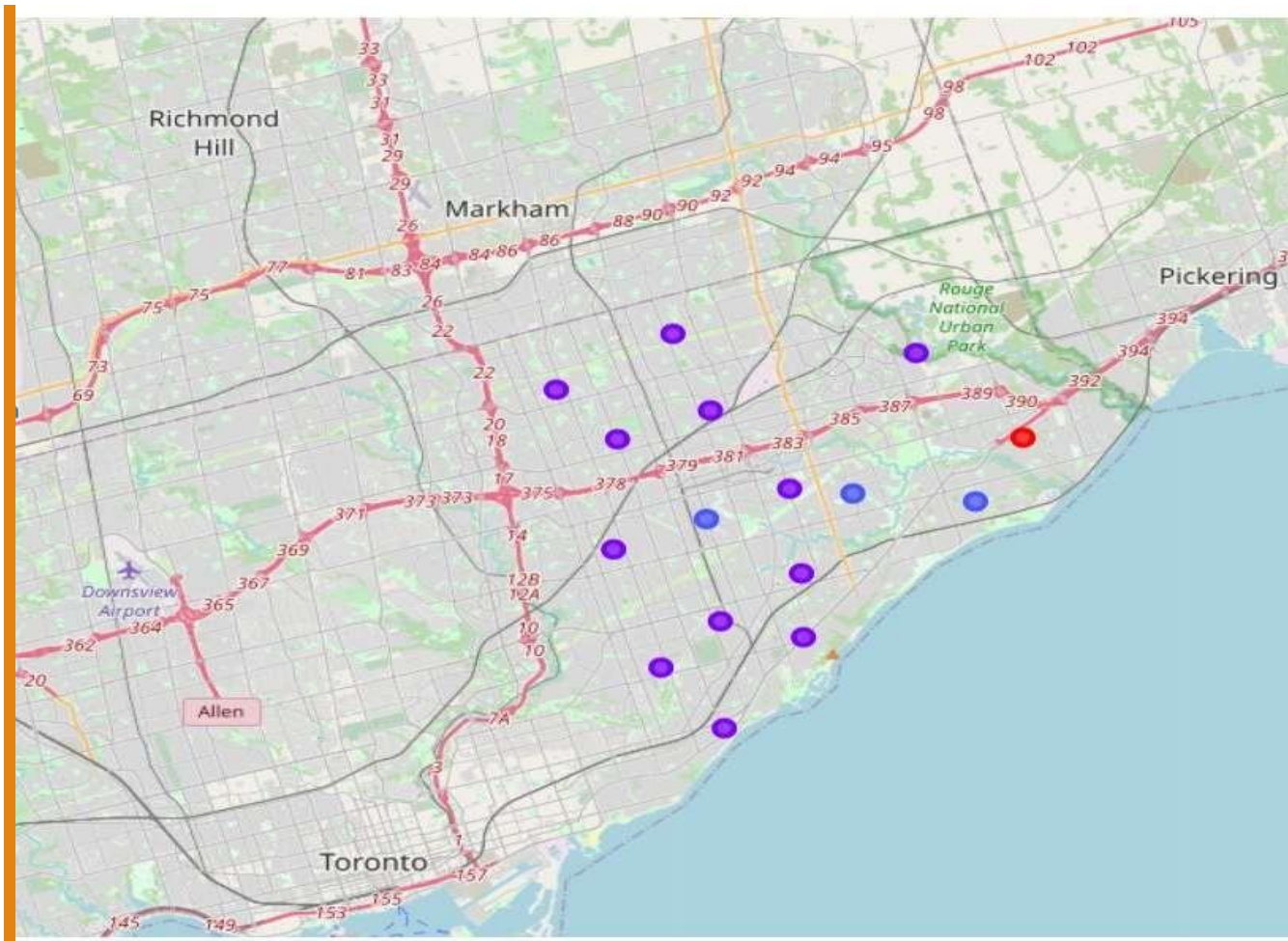
- The method of neighborhood comparison is k-means clustering.

	Postalcode	Borough	Neighborhood	Latitude	Longitude	Cluster Labels	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
0	M1B\n	Scarborough\n	Malvern, Rouge	43.81153	-79.19552	1	Zoo Exhibit	Paintball Field	Fast Food Restaurant	Business Service	Ethiopian Restaurant	Donut Shop	Dumpling Restaurant
1	M1C\n	Scarborough\n	Rouge Hill, Port Union, Highland Creek	43.78564	-79.15871	0	Bar	Fish & Chips Shop	Yoga Studio	Event Space	Donut Shop	Dumpling Restaurant	Eastern European Restaurant
2	M1E\n	Scarborough\n	Guildwood, Morningside, West Hill	43.76575	-79.17520	2	Park	Athletics & Sports	Gym / Fitness Center	Yoga Studio	Elementary School	Doner Restaurant	Donut Shop
3	M1G\n	Scarborough\n	Woburn	43.76820	-79.21761	2	Fast Food Restaurant	Park	Chinese Restaurant	Coffee Shop	Yoga Studio	Ethiopian Restaurant	Donut Shop
4	M1H\n	Scarborough\n	Cedarbrae	43.76969	-79.23944	1	Flower Shop	Hakka Restaurant	Caribbean Restaurant	Thai Restaurant	Gas Station	Athletics & Sports	Bakery

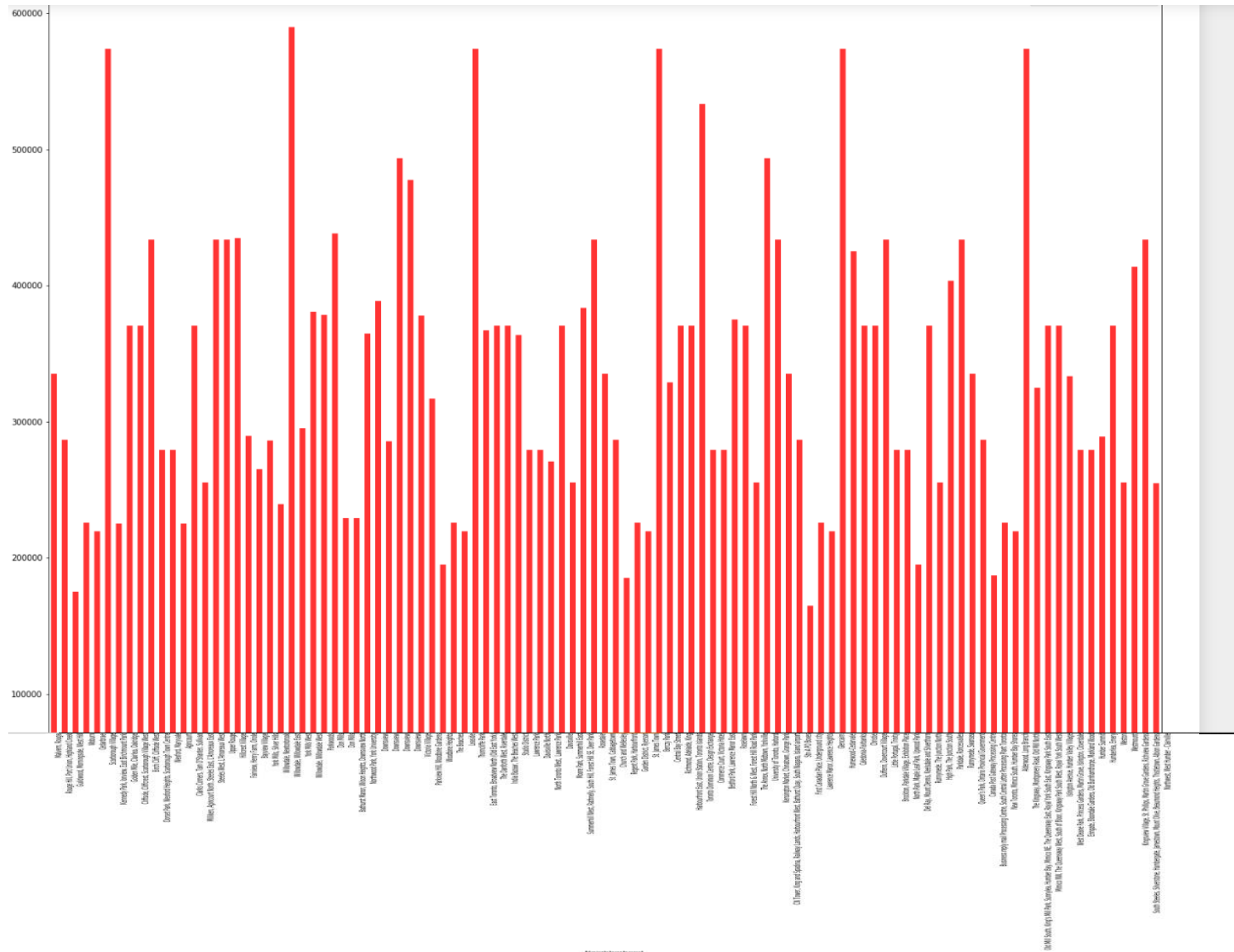
Here are the most common venues

	Neighborhood	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
0	Agincourt	Chinese Restaurant	Shopping Mall	Pizza Place	Bubble Tea Shop	Breakfast Spot	Seafood Restaurant	Malay Restaurant	Filipino Restaurant	Department Store	Sandwich Place
1	Alderwood, Long Branch	Gym	Pizza Place	Gas Station	Convenience Store	Print Shop	Pub	Pharmacy	Coffee Shop	Sandwich Place	Dance Studio
2	Bathurst Manor, Wilson Heights, Downsview North	Park	Other Great Outdoors	Convenience Store	Yoga Studio	Ethiopian Restaurant	Donut Shop	Dumpling Restaurant	Eastern European Restaurant	Electronics Store	Elementary School
3	Bayview Village	Asian Restaurant	Park	Trail	Yoga Studio	Elementary School	Doner Restaurant	Donut Shop	Dumpling Restaurant	Eastern European Restaurant	Electronics Store
4	Bedford Park, Lawrence Manor East	Sandwich Place	Restaurant	Italian Restaurant	Coffee Shop	Pharmacy	Pub	Juice Bar	Café	Liquor Store	Sports Club

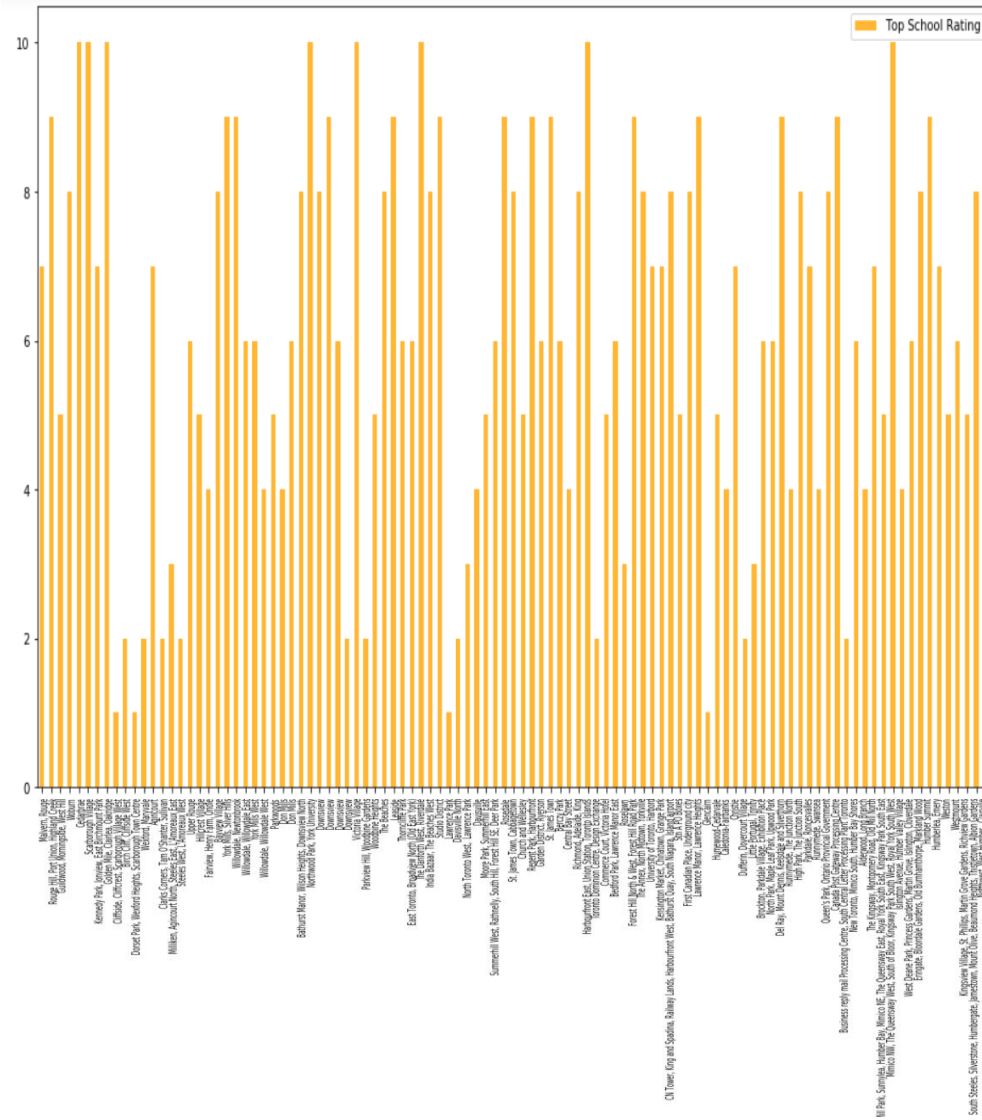
Clusters



Average house price in cluster



School rating by cluster



Conclusion

- What we can see that the best neighborhoods in the meaning of school ratings and house prices are Guildwood, Morningside, West Hill and Cedarbae