

Neighbourhood Recommendation for Indian Restaurant

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Business Problem and Background

- To recommend a neighbourhood for newly opening an Indian Restaurant in Toronto City
- The success of restaurant depends on the people (consumers) and the quality of services and food offered
- Restaurant business can be affected by competition from other restaurants of the same category
- Thorough information of the neighbourhood to open a new restaurant is must
- Such recommendation can be made using the data analysis

Who will be benefitted

- Investors who want to invest in the restaurant business and looking for more profit, low risk location for the same
- Indian restaurant food chains, who wish to expand their business in Toronto
- Business analysts, data analyst and data scientists, who wish to explore the neighbourhoods based on location data using FourSquare API
- People who would like to have an Indian restaurant or wish to provide Indian food services

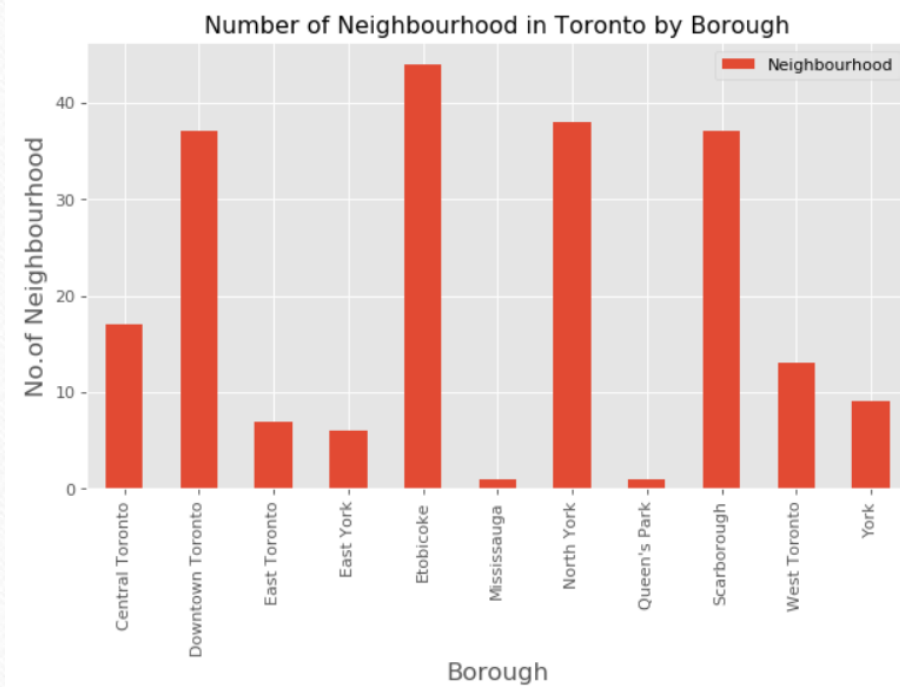
Data acquisition

- Boroughs and Neighbourhoods:
https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M
- Geographical Coordinates for Toronto City:
http://cocl.us/Geospatial_data
- Indian Restaurants and their details in the neighbourhood: FourSquare API
<https://developer.foursquare.com/docs>

Data Cleaning

- Rows with Boroughs as 'Not assigned' were removed from data set
- Cells with Neighbourhood names as 'Not assigned' were replaced with corresponding Borough names
- All the neighbourhoods were grouped by postal codes as the geographical coordinates data was available with postal code
- The Indian Restaurants for which details were not available on FourSquare API, were substituted as 0. i.e. 0 Likes, 0 Tips and 0 Rating

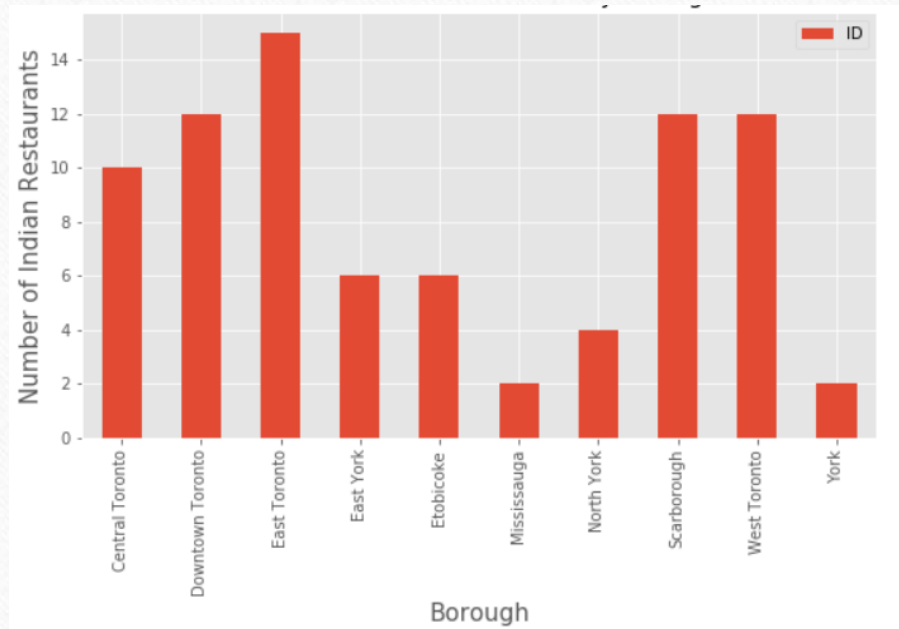
Exploratory Data Analysis



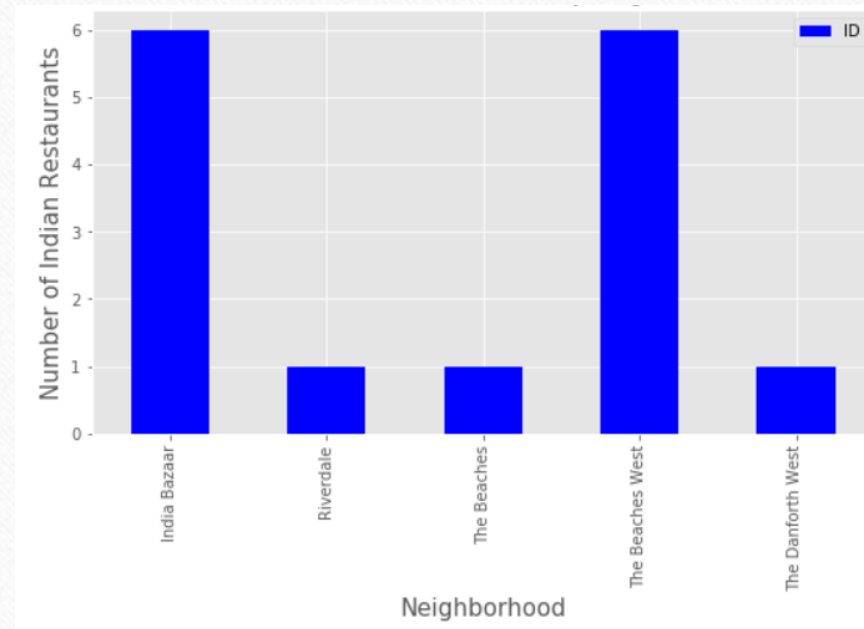
- Borough with maximum number of neighbourhoods = Etobicoke
- Borough with Minimum number of Neighbourhoods = York, Mississauga

Exploratory Data Analysis

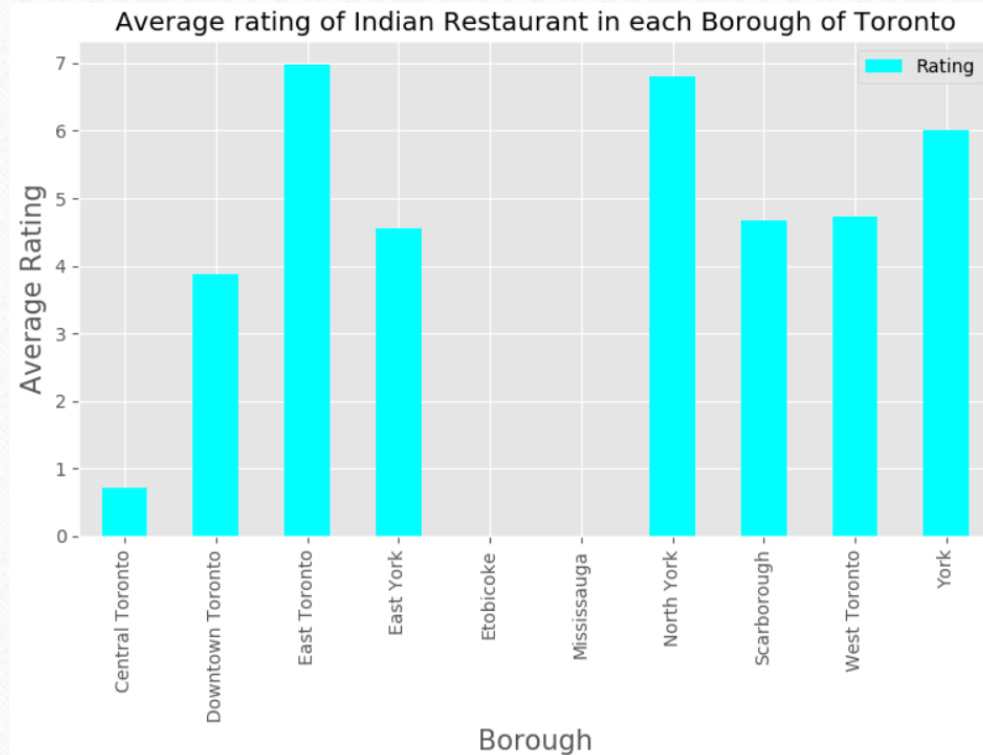
Indian Restaurants in Toronto by Borough



Indian Restaurants in East Toronto



Exploratory Data Analysis



	Neighborhood	Average Rating
7	Christie	8.4
29	Parkdale Village	8.1
2	Brockton	8.1
13	Exhibition Place	8.1
30	Queen's Park	7.9
20	Lawrence Manor East	7.6
1	Bedford Park	7.6
5	Cedarbrae	7.2
15	Harbourfront	7.1
10	Davisville North	7.1

Results

- Christie in Downtown Toronto is the neighbourhoods with best average rating for Indian Restaurants
- The East Toronto borough has maximum number of Indian restaurants and 80% of these restaurants are situated in India Bazaar and The Beaches West York
- Mississauga, North York and Etobicoke boroughs are having lower number of Indian Restaurants such as 2, 2, 4 and 6 Indian restaurants respectively.
- In terms of average ratings of Indian Restaurants, East Toronto borough tops the chart followed by North York, York, West Toronto and Downtown Toronto

Discussion

- Recommended Neighborhoods in West Toronto → All except Brockton, Exhibition Place and Parkdale Village.
- Recommended Neighborhoods in North York → All Neighbourhoods.
- Recommended Neighborhoods in York → All Neighbourhoods.

Conclusion and Future Scope

- In this project, only the details of existing Indian Restaurants such as location, likes, tips and ratings were used, and recommendations were made.
- The demographics data of the Toronto city such as population and income were not considered.
- All Neighbourhoods in North York and York are recommended for opening a new Indian Restaurant.
- More robust recommendations can be made by using the demographics data.

Thank You For Your Time !!!