

Applied Capstone Project Report

BUSINESS PROBLEM:

The Business problem framed for this task to identify the best location for setting up a "Indian Restaurant" in Toronto by an entrepreneur.

TARGET AUDIENCE:

People who wish to start an Indian Restaurant in Toronto.

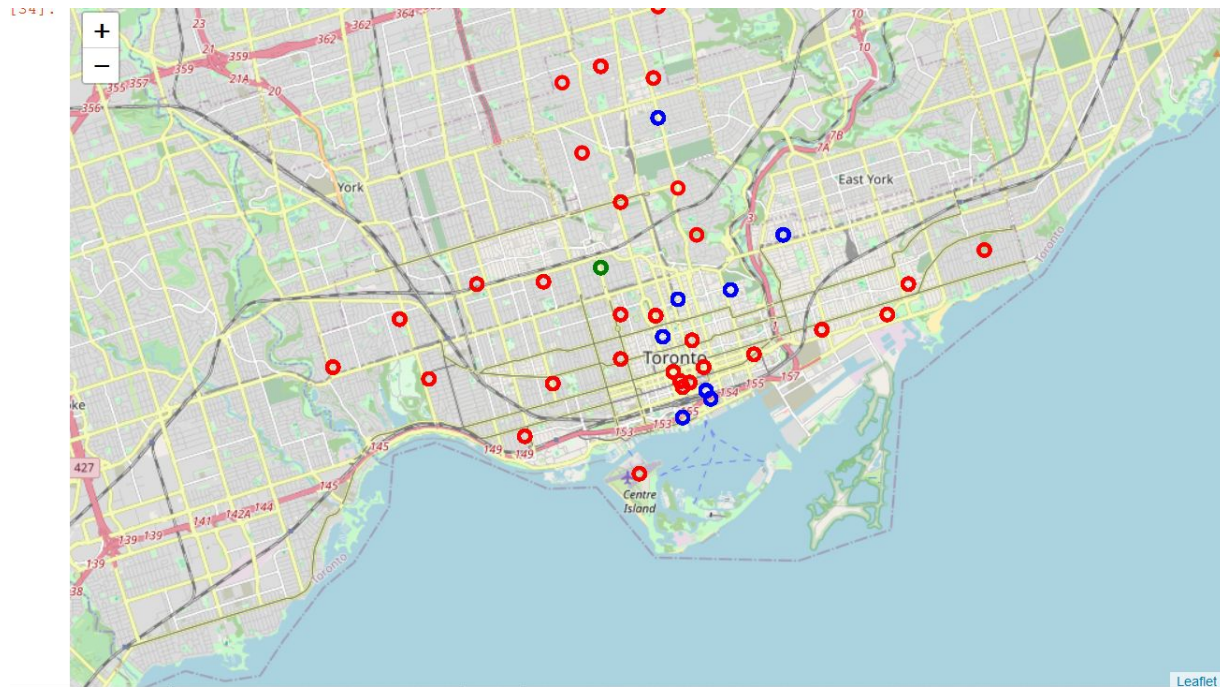
Data Required for Analysis:

1. Neighbourhood dataset of Toronto city (could be obtained by Scraping the Wikipedia using BeautifulSoup)
2. Latitude and Longitude values of the neighbourhoods (using Geocode Package)
3. Data associated with Indian Restaurant (using Foursquare calls)

Procedure:

1. The list of neighbourhoods in Toronto can be obtained by web scraping the table from the Wikipedia page [List of postal codes of Canada: M](#). This could be done by using the package called "Beautifulsoup" in Python.
2. To obtain the latitude and longitude location values of a particular location available in the table, a package called "Geocoder" could be used.
3. The "Folium package" could be used to visualize the geographical maps in python.
4. Foursquare API calls could be used to pull information about the nearest location of a specified venue. Eventually, name, category, latitude and longitude location nearby locations are obtained and tabulated.
5. Each neighbourhood could be analyzed by using the "Groupby" function in the pandas library .
6. Unsupervised machine learning algorithm called "K means clustering" could be employed to do a clustering based on their frequency of occurrence of "Indian Restaurants".

Results:



The results obtained by K means clustering are visualized using Folium above.

1. Cluster 1 - 8 locations with Indian Restaurants
2. Cluster 2 - 1 locations with Indian Restaurants
3. Cluster 0 - no results with Indian Restaurants

Recommendations:

1. Setting up a Restaurant at locations pertaining to Cluster 1 will be a very bad choice as it has a number of restaurants already.
2. Location of cluster 2 has only 1 restaurant, hence it would be a good choice.
3. Location cluster 0 has no restaurant, hence it would be a very great choice.

It is noted that there is an **Indian Movie Theater** at "Runnymede, Swansea". Hence setting up an Indian Restaurant at that location would attract the customers to dine in their restaurant after the movie time **as there is no Indian restaurant nearby**.

Conclusion:

The task of choosing a best location for setting up an Indian Restaurant was analyzed using the given dataset and Foursquare API.

A meaningful recommendation was drawn from the analysis results.

The location of Runnymede Swansea would be an Ideal location for setting up an Indian restaurant can be suggested to the businessman who wishes to start in Toronto.