BEST PLACE TO OPEN RESTURANT RECOMMENDER

1. Introduction:

The purpose of this Project is to help people in to find the best place to open new restaurant by exploring facilities and population around their neighborhood. It will help entrepreneur to making smart and efficient decision on selecting neighborhood out of numbers of other neighborhoods in Etobicoke, Canada.

Lots of people are staying to various Borough of Canada. We have taken Etobicoke that contain various neighborhood and done research for exploring the neighborhood to find a best place to open a new restaurant by taking the population and frequency of the other restaurant and stores . So this project is for those people who are looking for better neighborhoods to start a restaurant.

This Project aim to create an analysis of Etobicoke to search a best neighborhood as a comparative analysis between neighborhoods. The features include Population and frequency of other various categories of stores in the locality.

It will help people to get awareness of the area and neighborhood before to open to a restaurant in this Canadian city.

Problem Which Tried to Solve: The major purpose of this project is to suggest a better neighborhood in a new city for the person who wanted to open a new restaurant. The Problem is solved by using taking
- The population of the neighborhood
- The frequency of different categories of store in that location

The Location:

Etobicoke is a popular destination for new immigrants in Canada to reside. As a result, it is one of the most diverse and multicultural areas in the Greater Toronto Area, being home to various religious groups, places of worship and a residential area.

Foursquare API:

This project would use Four-square API as its prime data gathering source as it has a database of millions of places, especially their places API which provides the ability to perform location search, location sharing and details about a business.

Work Flow:

Using credentials of Foursquare API features of near-by places of the neighborhoods would be mined. Due to http request limitations the number of places per neighborhood parameter would reasonably be set to 100 and the radius parameter would be set to 500.

Clustering Approach:

To compare the similarities of two cities, we decided to explore neighborhoods, segment them, and group them into clusters to find similar neighborhoods in a big city like New York and Toronto. To be able to do that, we need to cluster data which is a form of unsupervised machine learning: k-means clustering algorithm

Libraries Which are Used to Develope the Project:

Pandas: For creating and manipulating dataframes.

Folium: Python visualization library would be used to visualize the neighborhoods cluster distribution of using interactive leaflet map.

Scikit Learn: For importing k-means clustering.

JSON: Library to handle JSON files.

XML: To separate data from presentation and XML stores data in plain text format.

Geocoder: To retrieve Location Data.

Beautiful Soup and Requests: To scrap and library to handle http requests.

Matplotlib: Python Plotting Module.