Coursera IBM Data Science Capstone Project Opening a new restaurant in Toronto, Canada.

Introduction

For the Capstone project, we have a scenario for a restaurant owner who wants to explore opening of a new branch in the city of Toronto, the capital of the province of Ontario, is a major Canadian city along Lake Ontario’s north-western shore. Toronto is home of diversified cultures and keeping that in mind, it becomes very important decision on what kind of restaurant should be opened.

Business Problem:

The purpose of this capstone project is to find the most suitable location for the restaurant owner to open a branch in part of Toronto city. Although several locations can be triangulated based on distance, the owner wants to find the most popular types of food consumed across different parts of the city to setup relevant cuisine. By using data science tools and machine learning models such as clustering, this project aims to provide solutions to answer the business question:

Target Consumer:

The restaurant owner who wants to explore best location to setup a branch in the city of Toronto.

Data:

To solve this problem, following data is needed:

1) List of Neighbourhoods in Toronto.

2) Latitude and Longitude of these areas.

3)Venue data related to all categories of restaurants. This is will useful in finding segments in the city which contains restaurant types.

Extracting the data:

1. Web scraping to retrieve list of areas in Toronto city. We achieved this by using Wikipedia
2. Extracting Latitude and Longitude data of these areas as it was already available with us.
3. Using Foursquare API to get venue data related in relevant areas.