Capstone Project - The Battle of the Neighborhoods (week 1)

Applied Data Science Capstone by IBM/Coursera

INTRODUCTION

This is a capstone project for IBM Data Science Professional Certificate. In this project, I am going to showcase a scenario regarding number of Indian restaurants in Toronto and how it is going to benefit for entrepreneurs to open Indian restaurant in Toronto and its neighborhood. Therefore it might be a great opportunity for Canadian based entrepreneurs. More than a million Indian people resides in Canada. So entrepreneurs might think of opening its business in the areas near to Indian communities. With the purpose, finding the best location to open such a restaurant is one of the most important decisions for these entrepreneurs and this project will help them to find the most suitable location.

BUSINESS PROBLEM

"*What is the most suitable location for an entrepreneur to open an Indian Restaurant in Toronto or Canada?"* The objective of this capstone project is to find the most suitable location for the entrepreneur to open a new Indian Restaurant in Canada, basically near Toronto. So, I will be leveraging the concept of Data Science Methodology along with Machine Learning Algorithms such as "Clustering" and I will be going to suggest some of the possible location and solution to this business problem.

TARGET AUDIENCE

All interested entrepreneurs who want to know the best suitable location to open an authentic Indian restaurant in Canada.

DATA

To explore into the data and finding a best possible solution, we will need below data:

- List of Postal Code, borough , Neighborhoods in Toronto, Canada [https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M]
- Latitude and Longitude of these Neighborhoods [http://cocl.us/Geospatial_data]
- Venue data related to Indian restaurants.

This will help us to find prospect neighborhoods/ location that are more suitable to open an Indian Restaurant.

EXTRACTING THE DATA

- Scrapping of Toronto neighborhood details by following Wikipedia page [https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M,]
- Getting geographical coordinates of the neighborhoods using the Geocoder package, geographical coordinates of each postal code.
- Leveraging Foursquare API to get venue data related to different neighborhood.