

Using Analytical and Machine Learning techniques to find best location to open an Indian Restaurant

1. Introduction

1.1 Background

For this Capstone project, I am creating a hypothetical scenario for opening an Indian Restaurant in city of Toronto. As we all know out of all population, there lives huge amount of Indians in Toronto. So it will open the gates of a nice restaurant for every Indian foodie living there. And also it might present a great opportunity for the entrepreneur who is based in Canada. Entrepreneur will think of opening the restaurant in the place where there is less Indian restaurant in the neighbourhood. With the purpose in mind, finding the location to open such a restaurant is one of the most important decisions for this entrepreneur and I am designing this project to help him find the most suitable location.

1.2 Business Problem

The objective of this capstone project is to find the most suitable location for the entrepreneur to open a brand new Indian restaurant in Toronto, Canada. By using data science analytical methods and machine learning algorithms such as clustering, this project aims to provide solutions to answer the business question: In Toronto, if an entrepreneur wants to open an Indian restaurant, where should they consider opening it?

1.3 Target Audience

The entrepreneur who needs a best location to open a brand new Indian restaurant.

2. Data

To solve this problem I will be needing the following data:

1. List of Neighbourhoods of Toronto
2. Latitudes and Longitudes of all the neighbourhoods in Toronto
3. Venue data of all the corresponding neighbourhoods including their name, category, longitudes and latitudes.

3. Extracting Data

- Neighbourhood's data of Toronto will be scraped from Wikipedia.
- Longitude and Latitude of Toronto neighbourhood will be fetched from geocoder package
- Foursquare API will be used to get venue data such as venue name, venue category, venue latitudes and venue longitudes.