Capstone Project: The Battle of Neighbourhoods
Indian Restaurants in Berlin, Germany

1. Introduction

1.A. Background

The city of Berlin in Germany is one of the important city in Germany. Being the capital city of Germany it attracts a lot of people both for official as well as tourism visits. The population of Berlin has been estimated to be around 3.5 million[1]. Berlin also host tourists from all over the world visiting the city for tourism. Berlin also attracts many foreign people from all over the world for both professional purpose as well as for studies. Thus along with local people many foreign nationals used to stay in Berlin for their work or study.

As Berlin attracts many people from all over the world specially the Indians so Indian food is an important aspects for the people from India. Apart from Indians many foreign nationals also like to have Indian food. As Berlin is a place of many foreign nationals thus restaurants serving Indian Food will be an interesting aspect of the study.

1.B. Business Problem

As discussed in the Background section that Berlin host many people from within Germany as well as from different parts of the world for both professional purpose as well as Tourism thus restaurants in Berlin is an important aspect to study. Out of various cuisines the Indian cuisine seemed to an interesting aspect of study as apart from Indian nationals many Foreign nationals also like to have Indian cuisine.

In this project we will try to address the following problem,

- Optimal location for opening an Indian restaurant in the city of Berlin

- Berlin being the capital city of Germany there are many restaurants all over Berlin thus we will try to identify locations in the Berlin city that are not crowded with the restaurants

- We are also interested in the locations which do not have any Indian restaurants in the vicinity

- If the above mentioned criteria gets satisfied we will also prefer the location should be as close to the city centre as opening a restaurant far away from city centre will not attract any customers and this is not good for the business

1.C. Target Audience

The main target audience for the project is anyone or stakeholder who wanted to open an Indian restaurant in the city of Berlin. This project will help the future stakeholder to analyse the present conditions that are,

- Locations of present restaurants

- Total number of restaurants

- Locations of Indian restaurants

- Total number of Indian restaurants

Based on this data and the analysed data from which he can understand,

- Location for opening an Indian restaurant

- Distance of that location from the city centre

These data will help the stakeholder to invest their money in opening an Indian restaurant in the city of Berlin.

2. Data Description

Based on our problem definition the main factors that will affect our decision are

- Number of existing restaurants in the neighbourhood

- Number of Indian restaurants in the neighbourhood

- Distance to the Indian restaurants

- Distance of the neighbourhood from the city centre

In order to address our problem we have decided to use regularly spaced grid of locations around the central location of the city of Berlin to define our neighbourhoods. For this we will be performing the following steps,

- We will identify a well known location at the central part of the city of Berlin ('Alexanderplatz')

- Then using the "Geolocator" function we will find the co-ordinates or Latitude and Longitude of the central part of Berlin city

- After that we will be creating centres of interesting areas for our problem using user defined algorithm

- With the help of the algorithm we will be having a set of co-ordinates for all the centres of interest

- Then we will be using "Reverse Geolocator" function in order to obtain the address for the interesting centres

- After that we will be using Foursquare API (https://developer.foursquare.com/docs/resources/categories) in order to identify the Indian restaurants having category ID of "4bf58dd8d48988d10f941735"

- After that we will be using all the categories of Indian restaurants from Foursquare API and find out the locations of the Indian restaurants

- We will be using heat map to identify the suitable locations for opening an Indian restaurants and also we will keep in mind the distance between the location and the city centre defined earlier

- Based upon our heat map we will identify few locations for the stakeholder which have low density of Indian restaurants and also they are close to the central part of Berlin

- Then based upon the Borough we will cluster our result on the basis of locations for the stakeholder to choose and invest their funds to open a business