Opening a Restaurant in London, UK

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May 2020

1.Introduction

1.1 Background

In an age where people are more inclined to go out for food rather than cooking at home as it is a lot easier and less hassle than preparing at home, there are hundreds of new and different restaurants opening across London, from burger places like Five Guys and Gourmet Burger Kitchen to Dessert places like Kaspas and Heavenly Desserts. There are also many different cultural restaurants such as; Preto (*Brazilian*) and Ask Italia (*Italian*). The reason these types of places are so successful is because they provide Quality food in a nice setting and take away all the hassle and mess of cooking at home. For this reason more and more restaurants are opening up around the different counties of England, particularly in Cities, however a lot of planning goes into where a restaurant should open as this will determine the success of the business. Property developers are realising there is a lot of money to be made from rental prices as more places open up, therefore being able to determine good areas to open up a restaurant is key to the success of the business.

1.2 Business Problem

In this report the aim is to provide detailed and valuable predictions to potential businesses on where to open a new restaurant based on the amount of already existing restaurants in a particular area. This will be done using Data Science, analytics and Machine Learning methods. By the end of the report the client should be able to answer the question; "Where is the best place to open up my Restaurant in London ."

2. Data Acquisition & Cleaning

2.1 Data Acquisition

The data we require will be:
- List of neighbourhoods which will be limited the area of London, UK
- Latitude and Longitude of each area, which will be used as part of the foursquare venue locations and plotting the areas on a map
- Unique Venue categories focusing on restaurants.

This Wikipedia page (https://en.wikipedia.org/wiki/List_of_areas_of_London) contains all the Suburbs within the London region. Using data mining techniques such as BeautifulSoup and Pandas we shall extract the relevant information and place it into a table. Using Geolocator we will also get the latitude and longitude of each town to be used with Foursquare API in order to find out how many Restaurants are in a particular area and where is the best place to open up depending on competition. The reason for using Foursquare is it has over 100million places and is used by many developers in order to get relevant information about certain areas.

2.2 Data Cleaning

As Foursquare returns a variety of different venue categories we shall be focusing on the ones containing the word 'Restaurant'. This will make clustering the data using K-means more accurate to the industry we are focused on. Also as part of the data cleaning process any rows or columns containing missing values will be removed as these may interfere with our results.