



OPENING A NEW RESTAURANT IN DELHI, INDIA

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1- Introduction

A client approached us with a concept of a restaurant which will provide street food of countries around the world. After discussing with the client, we finalized the layout of the restaurant. The restaurant will have different counters providing street food of different countries such as Indian, Mexican, Chinese, European etc. with a central sitting arrangement. The counters will be decorated as per the country it represents. The ambience and layout are very important to attract the customers. Delhi's urban area has an estimated population of 26 million (2016) making it the second largest urban area in the world as per the United Nations. Delhi is also the second wealthiest city in India after Mumbai. This stats are important in order to highlight the fact that if the restaurant is well maintained and properly located than the chances of it being a success story is high considering the population and the spending power of the public.

2 - Business Problem

The business problems that the client faces in opening a restaurant are as follows:

1. Selecting the best location for the restaurant in the city of Delhi, India.
2. Target audience that the restaurant will cater to.
3. Other factors to be considered for opening the restaurant.

We will use data science methodology and machine learning techniques like clustering to provide solutions to our client. We will analyze the neighborhoods in the city of Delhi, India and select the best location for the restaurant. We will also provide our insights in the final report which will answer all the queries faced by our client.

3 - Select the best Location

A good location is a crucial factor for a restaurant which might well decide if it will be success or a failure. Since the restaurant provides only street food, it will not be competing with the normal restaurants within the city. It's main competitors will be fast food chains and popular street vendors. The location should be such it ensures maximum footfall for the restaurant. It would be better if it can be located in a dense cluster with major landmarks.

4 - Target Audience

The restaurant will cater to all sections of the population since everyone likes to have street food which is from their state or country. The restaurant should target working people or people who are out shopping since this people will be looking for food options which they can consume quickly and return back to their activity. It can also target people who come for morning walks or exercise if the restaurant is located near a park.

5 - Other factors

The other factors which will play an important role in opening the restaurant are other fast food chains and popular street food vendors near the selected location, parking area, space etc.

6 - Data

To solve the problem, we will use the following data:

1. List of neighborhoods in Delhi, India.
2. Latitude and Longitude coordinates of those neighborhoods.
3. Venue data in order to identify the most common venues within the clusters.

The data of neighborhoods is collected from Wikipedia while the latitude and longitude coordinates of the neighborhoods is collected from Google. The complete data is stored in a CSV file which will be used to produce the pandas dataframe using Python.

After that, Foursquare API will be used to get the venue data for those neighborhoods. The Machine Learning technique (K-means clustering) will be used to cluster the neighborhoods. Data visualization technique(Folium) will be used to produce the neighborhood and cluster maps. In this way, we will be employing the data science knowledge acquired during the course to solve the problem.