

OPENING A NEW RESTAURANT IN DELHI, INDIA

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1. INTRODUCTION

1.1 Background

In India and especially Delhi, restaurants having Indian cuisine are the most popular. Delhi has people from different parts of India, thus the city has different types of food traditions; its cuisine is influenced by the various cultures. Punjabi cuisine is common, due to the dominance of Punjabi communities. Delhi cuisine is actually an amalgam of different Indian cuisines modified in unique ways. This is apparent in the different types of street food available. Indian restaurants in Delhi comprise of these uniquely modified Indian cuisines ranging from delicacies like Dal Makhani from Punjab to Biryani from Hyderabad. In the current scenario where people prefer to go out more opening a new Indian Restaurant in the neighbourhoods of Delhi can be very profitable.

1.2 Problem

This project aims to segment the neighbourhoods of Delhi on the basis of presence of Indian restaurants in them so that the perfect neighbourhoods for the opening of a new Indian restaurant can be determined where the restaurant won't get lost in a cluster of other Indian restaurants and also not face a lot of competition, hence being exclusive in the location and profitable for the owner.

1.3 Interest

Any business owner or an individual looking to open a new Indian restaurant in Delhi would be very interested in knowing the best location for his/her restaurant. Existing restaurant owners which aim to make more profits can use this model for relocation of their restaurants as well. This model will also show how Indian restaurants are the most common restaurants in Delhi.

2. Data acquisition and cleaning

2.1 Data sources

This project will require:

- Dataset containing the neighbourhoods of Delhi.
- Location data which can help us get venues nearby to each neighbourhood.

Dataset containing the neighborhoods of Delhi as well as their latitude and longitude coordinates can be found on Kaggle.com on the following link: https://www.kaggle.com/shaswatd673/delhi-neighborhood-data/data?select=delhi_dataSet.csv

To get venues nearby to each neighbourhood we will leverage the Foursquare API. The Foursquare API will provide many categories of venue data, we are particularly interested in the Indian Restaurant category in order to help us to solve the business problem put forward.

2.2 Data cleaning

We find that the latitude and longitude information for 33 neighbourhoods is not available hence we will remove the rows associated with those neighbourhoods.

As the neighbourhood dataset already contains an index column we will have to remove that column named 'unnamed: 0' so that we have a single indexing for our dataset.

The Foursquare API call will return a cleaned dataset in a json file format which we will have to convert into a pandas data frame.

In the next sections we will use the cleaned datasets and process them further for modeling and applying visualization techniques to get clearer insights into the data we have.