

Coursera Capstone

IBM Applied Data Science Capstone

Opening a New Restaurant in Creativity City of Gastronomy
(Hyderabad), India



Introduction

Hyderabad, India is not only known as the 'City of pearls' but recently it has also been awarded by UNESCO as the 'Creative city of Gastronomy'. It is one of India's most visited tourist places with lots of tourist attraction spots like Charminar, Safdarjung Museum, Golconda Fort etc. Also, people visiting this place never forget to miss out on its worldwide famous cuisine 'Hyderabadi Biryani'. Restaurants are like a non-stop destination for all the food lovers. The central location and the large crowd gatherings near shopping mall or Inox (Cine theatre) provides great advantage and distribution channel for restaurants. As a result, there are many chains of restaurants in the city of Hyderabad and many more are coming up. Opening a restaurant allows property developers to earn consistent rental income. Of course, as with any business decision, opening a new restaurant requires serious consideration and lots of planning. Particularly, the location of the restaurants is one of the most important decisions that will determine whether the restaurant will be a success or a failure.

Business Problem

The objective of this capstone project is to analyse and select the best locations in the city of Hyderabad, India to open a new Indian restaurant. Using data science methodology and machine learning techniques like clustering, this project aims to provide solutions to answer the business question: In the city of Hyderabad, India, if a business person is looking to open a new restaurant, where would you recommend that he open it? If in case there are already two Indian restaurants which have good ratings, will it be risky to open new one near these restaurants? What all factors will help him to run his business above average? (Out of scope for this project: Budget for Kitchen tools, restaurant furniture and decorations, hire new chef's and waiters, budget everybody's salary. Decide on Menu details, restaurant advertisement, publish discount coupons, restaurant website.)

Target Audience of this project

This project is particularly useful to property developers, investors or business men or a freelancer looking to open or invest in new Indian restaurants in the capital city of Telengana i.e. Hyderabad. This project is timely as the city has been recently awarded by UNESCO as creative city of Gastrology.

Data

To solve the problem we need the following data:

- List of neighbourhoods in Hyderabad. This defines the scope of this project which is confined to the city of Hyderabad(excluding Secunderabad), the capital city of the Telengana in South India.
- Latitudes and Longitudes coordinates of those neighbourhoods. This is required in order to plot the map and also get the venue data.
- Venue data, particularly data related to cafeteria, restaurants. We will use this data to perform clustering on the neighbourhoods.

Sources of data and methods to extract them

- Wikipedia page for neighbourhoods
https://en.wikipedia.org/wiki/Category:Neighbourhoods_in_Hyderabad,_India
- Geocoder package for latitude and longitude coordinates.
- Foursquare API for Venue Data.