Coursera Capstone Project

IBM Data Science Professional Certification

The Battle of Neighborhoods

Finding a potential venue for opening new Hotel in Mumbai, India

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Introduction

In a metro city like Mumbai, the business tourism has been developing quite rapidly. As the Mumbai city is said to be the financial capital of India, the business tours from foreign and other cities of India happen quite often. Thus hotel business contribute well in the economy also. Hotels near Railway stations and Airport are most likely to be the first choice for business professionals. Hotels are better option for staying during business visits. There are number of hotels in different areas of Mumbai which serve as better staying option for tourism especially business tourism because of the financial activities in Mumbai. For building a new hotel and starting new business in hotel industry requires several attributes to be considered. The main attribute to be considered is the area and surroundings in which we want to open the hotel. The location and venue of the hotel to be opened is the most important feature to be considered for opening new Hotel.

Business Problem

The main motivation of doing this capstone project is to develop a plan to find best suitable venue or location for opening new hotels in Mumbai, India. As discussed in the previous section, we need to focus on the area or surroundings for different neighbourhood and suburbs in Mumbai. We need to come up with concrete information about the distribution of hotels in Mumbai's various areas. Then we will be able to analyse that which area should be considered as the potential area for opening new hotel. The main objective of this project is to suggest a potential area where a person can build and open hotel for maximum benefits.

Target Audience

The target audience for this project is property developers and hotel business professional builders who are looking to invest or venture by opening new hotel. By this project, we will be able to recommend better and potential areas for investment for such personnel. There are excessive amount of hotels in some areas, so we can smartly analyse by the data that which area is the most beneficial for opening new hotel.

Data

The data that we will need to complete this project is :

- List of suburbs in Mumbai, India
- Coordinates for each suburb (Neighborhood) in terms of Longitude and Latitude
- The data related to Hotels (Venue Data)

Data Description and Sources of Data

The data we will be using for collecting suburb information of Mumbai, India is available at this location : https://en.wikipedia.org/wiki/Category:Suburbs_of_Mumbai

This data contains 42 neighborhoods or suburbs of Mumbai. This data can be extracted by using Web Scrapping method. For that we can use BeautifulSoup package of Python.

We can get coordinates in terms of Longitude and Latitude from Geocoder package of python for each suburbs of Mumbai.

Foursquare API can be used for collecting venue data for the neighborhoods in Mumbai with the help of gathered coordinates. We will extract mainly Hotel venue data for the project.

After getting this hotel venue data for each suburbs of Mumbai, we can do the visualization of this data and clustering the data to gather important insights.