

Searching a Hotel to Stay

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Introduction to the Problem

Often when a Student/Working Professional comes to a city for attending a seminar or any sort of thing, he/she searches for a hotel to stay and generally ends with lots of choices or no choice at all. This project is focused on easing the problem of finding a right place (Probable area in the city) to stay for an individual.

Target Audience: Anyone going to a new city and wants a Hotel to stay

Dataset

Dataset used in this project will be taken from FourSquare.com API. The dataset will consist of hotels around the visiting venue along with their latitude and longitude details.

Methodology

First, we will setup the notebook by installing the libraries and configuring the credentials.

Then, we will fetch the latitude and longitude of the visiting venue. Then, we will search for **Hotel** by providing the search query to the foursquare API call. within 500m radius.

In third step, we will convert the data into dataframe and finally plot the hotels and venue on Map using folium library. As a data analysis step, We will try to get the rating of the hotels again the foursquare API call.

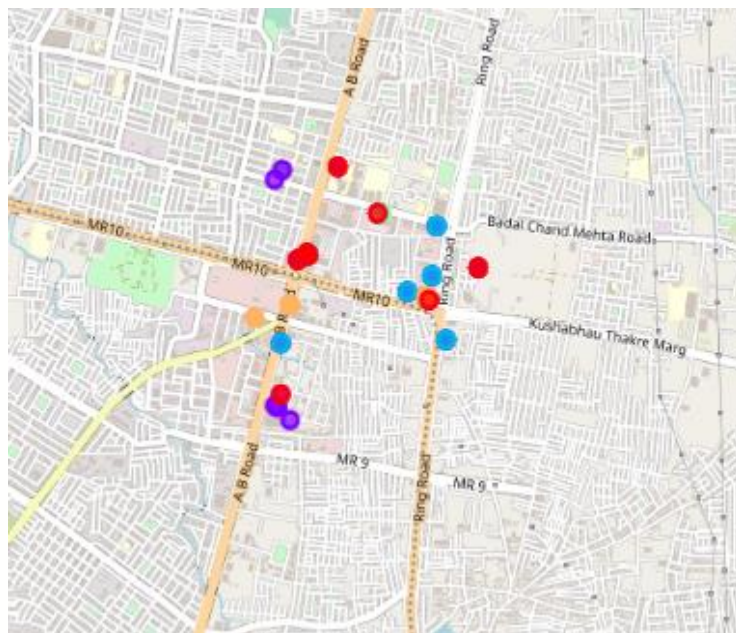
In the fourth step, we will explore the hotels one by one and fetch multiple venues around the hotel along with their categories and location details and combine the data into a single dataframe.

In the last step, we will apply KMeans clustering algorithm to make clusters and finally display them on map and then will do analysis.

Analysis, Results and Discussion

After analyzing all the clusters, We found that in our case cluster 1 contains most probable hotels, one can consider to stay.

This is due to the fact in cluster 1, hotels also have multiple different venues around it such as Multiplex, Clothing Store, Bakery etc, whereas in other clusters they are absent or less in numbers.



Conclusion

Purpose of this project was to identify probable areas close to the visting venue with high number of different venues such as multiplex, Clothing store, restaurant, Mall etc. in order to aid an individual in narrowing down the search for optimal location for a hotel to stay.

Final decision on optimal hotel location will be made by the individual based on specific characteristics of hotels and locations around it.

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