PLANNING A CONCERT IN MUMBAI

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Introduction

When it comes to event planning, there are so many variables we need to tune if we want to plan a successful event where its enjoyable for the guests as well as easy to manage for the planners as well. We conduct a study into event planning with the help of an example of planning a concert in a huge populated city of Mumbai. The variables we are considering for this study are the following:

- Concert Halls to play music in.
- Accommodation for the music artists and their staff as well.
- Advertising agencies to work with for promotion of the event.
- Travel agencies for transportation.

This study gives an insight into what's possibly a good combination of these variables to help plan a successful event.

Business Problem

Architects is a well-known UK metal band who wants to play a show in India, specifically in Mumbai owing to its huge population and big fan following from the city itself. We have been instructed as an agency to provide them with the following details:

- Venues
- Accommodation
- Advertising Agencies
- Travel Agencies

Target Audience

This study aims to provide an insight into provide good combinations to potential event planners for planning music related events. It also provides them with required data and possible reasoning into selecting a venue for their events.

Data Modelling

To solve the given problem, we modelled our data into the following attributes:

- Name of the venue
- Latitude of the venue
- Longitude of the venue
- Category the venue belongs to

Data will be directly fetched from Foursquare API.

Sources of Data

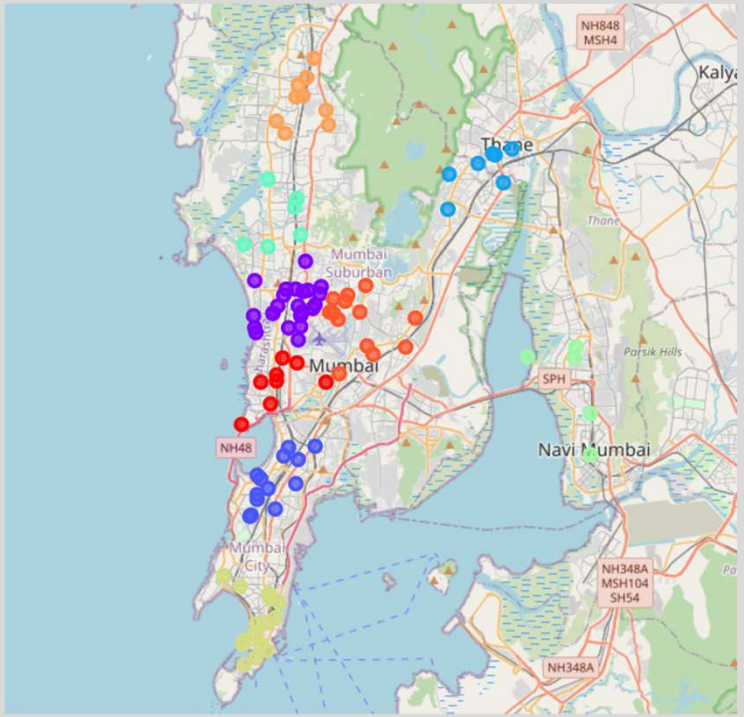
After that, we will use Foursquare API to get the venue data for those neighbourhoods. Foursquare has one of the largest databases of 105+ million places and is used by over 125,000 developers. Foursquare API will provide many categories of the venue data. This is a project that will make use of many data science skills, from working with API (Foursquare), data cleaning, data wrangling, to machine learning (K-means clustering) and map visualization (Folium). In the next section, we will present the Methodology section where we will discuss the steps taken in this project, the data analysis that we did and the machine learning technique that was used.

Methodology

- Firstly, we fetched all the required data category-wise. This step also involves data modelling and cleaning of the incoming API data and also saving them in CSV format.
- Secondly, we used map visualizations to display all of those venues interactively using folium. Each of those visualizations were saved in HTML formats for future use.
- Thirdly, we performed clustering depending on the position and also mapped its visualization to display the results of our study.

Results

This is the final result we obtained from this study. The clusters formed here are location wise depending on the latitude and longitudes of those venues.



Discussion

As observations noted from the visualization from the results, we observe the following:

- Most clusters are present in mainland/central Mumbai (red, violet, orange, green and blue) which serves as a great combination for a lot of events given the number of attractions and also population in mainland Mumbai.
- As you move away from mainland Mumbai, we see the clusters being smaller and less clustered. This observations leads us to believe that the opportunities outside of mainland Mumbai gets lesser and lesser as you move farther from it.

Conclusion

In this project, we have gone through the process of identifying the business problem, specifying the data required, extracting and preparing the data, performing machine learning by clustering the data into 10 clusters based on their similarities, and lastly providing recommendations to the relevant stakeholders i.e. event planners regarding the best locations for a concert. To answer the business question that was raised in the introduction section, the answer proposed by this project is: Mainland Mumbai is one of the best places to hold a successful music concert since it's the main hub of Mumbai.