

Coursera Capstone Project

The Battle of Neighbourhoods

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Coursera Capstone Project

— The Battle of Neighbourhoods

In this project we will try to find an optimal location for a restaurant. Specifically, this report will be targeted to stakeholders interested in opening an **Italian restaurant** in **Bangalore**, India.

Since there are lots of restaurants in Bangalore we will try to detect **locations that are not already crowded with restaurants**. We are also particularly interested in **areas with no Italian restaurants in vicinity**. We would also prefer locations **as close to city center as possible**, assuming that first two conditions are met.

We will use our data science powers to generate a few most promising neighbourhoods based on this criteria. Advantages of each area will then be clearly expressed so that best possible final location can be chosen by stakeholders.

Introduction

Bangalore, officially known as Bengaluru, is the capital of the Indian state of Karnataka. It has a population of over ten million,[8] making it a megacity and the third-most populous city and fifth-most populous urban agglomeration in India.[15] It is located in southern India, on the Deccan Plateau at an elevation of over 900 m (3,000 ft) above sea level. Its multi-ethnic, multi-religious,[promotional language] and cosmopolitan character[promotional language] is reflected by its more than 1000 Hindu temples, 400 mosques, 100 churches, 40 Jain Basadis, three Sikh gurdwaras, two Buddhist viharas and one Parsi fire temple located in an area of 741 km² of the metropolis.[citation needed] The religious places

are further represented by the proposed Chabad of the Jewish community. The numerous Bahá'ís have a society called the Bahá'í Centre.[16]



The City's history dates back to around 890 AD, in a stone inscription found at the Nageshwara Temple in Begur, Bangalore. The Begur inscription is written in Halegannada (ancient Kannada), mentions 'Bengaluru Kalaga' (battle of Bengaluru). It was a significant turning point in the history of Bangalore as it bears the earliest reference to the name 'Bengaluru'.[17].

With it's diverse culture , comes diverse food items. There are many restaurants in Bangalore City, each belonging to different categories like north Indian, South Indian, Chinese , Italian , French, middle east etc.

So as part of this project , we will list and visualise all major parts of Bangalore City that has Italian restaurants.

Data

For this project we need the following data :

- Bangalore City data that contains list Boroughs, Neighborhoods along with their latitude and longitude.

Data source :

- <https://en.wikipedia.org/wiki/Bangalore>
- <http://pincode.india-server.com/cities/bengaluru/>
- <https://data.gov.in/resources/all-india-pincode-directory-contact-details-along-latitude-and-longitude/api>

Description : This data set contains the required information. And we will use this data set to explore various neighborhoods of Bangalore city.

- Indian resturants in each neighborhood of Bangalore city.

Data source : Fousquare API

Data extracted looks as below,

```
[ 28 ]: df
```

[28]:	Postalcode	Town	Neighborhood	Latitude	Longitude
0	560001	Bangalore	Bangalore Bazaar , Bangalore G.P.O., CMM Court...	12.979185	77.606623
1	560002	Bangalore	Bangalore City , Bangalore Corporation Building	12.964070	77.577647
2	560003	Bangalore	Malleswaram , Palace Guttahalli , Swimming Poo...	13.003656	77.569745
3	560004	Bangalore	Basavanagudi , Mavalli , Pampamahakavi Road , ...	12.945664	77.575075
4	560005	Bangalore	Fraser Town	12.998115	77.620842
...
126	562149	Bangalore	Bagalur , Bandikodigehalli , Kannur	13.109270	77.678845
127	562157	Bangalore	Bettahalsur , Chikkajala , Doddajala , Hunasam...	13.168690	77.635941
128	562162	Bangalore	Aluru , Dasanapura , Hullegowdanahalli , Husku...	13.063310	77.439025
129	562163	Bangalore	Arakere , Basettihalli , Doddatumkur , Konnaga...	13.260500	77.530259
130	562164	Bangalore	Avathi , Bidalur , Bijjawara , Karahalli , Koir...	13.304470	77.706258

131 rows × 5 columns

Approach

- Collect the Bangalore city data from available data sources
- Using FourSquare API we will find all venues for each neighbourhood.
- Filter out all venues that are Indian Restaurants.
- Find rating , tips and like count for each Indian Restaurants using FourSquare API.
- Using rating for each restaurant , we will sort that data.
- Visualize the Ranking of neighbourhoods using folium library(python)

Questions that can be asked using the above mentioned datasets

- What is best location in Bangalore City for Italian Cuisine?
- Which areas have potential Italian Restaurant Market?
- Which all areas lack Italian Restaurants?
- Which is the best place to stay if I prefer Italian Cuisine?