

An aerial photograph of a city, likely Mumbai, India. In the background, a large, ornate building with multiple domes and arches is visible, surrounded by other urban structures. In the foreground, a wide, multi-lane road is filled with traffic, including cars, buses, and motorcycles. The road is flanked by lush green trees and vegetation. The overall scene depicts a bustling urban environment.

THE BATTLE OF NEIGHBOURHOOD

CAPSTONE PROJECT REPORT FOR APPLIED DATA
SCIENCE CERTIFICATION

GAWALI.SAGAR@GMAIL.COM

Contents

1. Introduction/Business Problem	3
2. Data	4

1. INTRODUCTION/BUSINESS PROBLEM

Bengaluru is the capital of the Indian state of Karnataka. It has a population of more than 11 million, making it the third-most populous city and fifth-most populous urban agglomeration in India. Located in southern India on the Deccan Plateau, at a height of over 900 m (3,000 ft) above sea level, Bangalore is known for its pleasant climate throughout the year. The city is also widely regarded as the "Silicon Valley of India" (or "IT capital of India") because of its role as the nation's leading information technology (IT) exporter. Indian technological organisations such as ISRO, Infosys, Wipro, and HAL are headquartered in the city. A demographically diverse city, Bangalore is the second-fastest-growing major metropolis in India. Recent estimates of the metro economy of its urban area have ranked Bangalore either the fourth or fifth-most productive metro area of India. It is home to many educational and research institutions in India. Numerous state-owned aerospace and defence organisations, such as Bharat Electronics, Hindustan Aeronautics, and National Aerospace Laboratories are located in the city. The city also houses the Kannada film industry.

Owing to the factors mentioned above, there is a high demand for residential apartments/bungalows/villas, etc. (both rented/owned). And most of the time a newcomer in the city or someone who is trying to relocate within the city doesn't know which place is good for staying and which is not based on personal criteria. As part of this project, we would try to answer this question - Which area is suitable for different categories of people. We will also try to answer whether the area is good for staying for a bachelor's or families.

We can classify people into different categories. E.g. - someone who loves native food (i.e Indian Food, or western food), someone who prefers other sorts of entertainment, gym and fitness center, etc.

2. DATA

To answer the question raised in section, we will need the following set of data:

- Classification of areas of Bengaluru city into smaller area i.e. ward (a ward is an administrative unit of the city region;)
- Venue data (Malls, market, Supermarket, Parks, Schools, recreational activities, restaurants)

We will use the following sources for the above-mentioned data categories

1. Ward data: <https://opencity.in/data/bbmb-wards>

Sample:

Ward No	Ward Name	BBMP Zone Name	BBMP Division	BBMP Sub Division	Assembly constituency	MP Constituency
1	Kempegowda Ward	Yelahanka	Yelahanka	Yelahanka	Yelahanka	Chikballapur
2	Chowdeswari Ward	Yelahanka	Yelahanka	Yelahanka	Yelahanka	Chikballapur
3	Atturu	Yelahanka	Yelahanka	Yelahanka	Yelahanka	Chikballapur
4	Yelahanka Satellite Town	Yelahanka	Yelahanka	Yelahanka	Yelahanka	Chikballapur
5	Jakkuru	Yelahanka	Byatarayanapura	Byatarayanapura	Byatarayanapura	Bangalore North
6	Thanisandra	Yelahanka	Byatarayanapura	Byatarayanapura	Byatarayanapura	Bangalore North
7	Byatarayanapura	Yelahanka	Byatarayanapura	Byatarayanapura	Byatarayanapura	Bangalore North
8	Kodigehalli	Yelahanka	Byatarayanapura	Byatarayanapura	Byatarayanapura	Bangalore North
9	Vidyaranyapura	Yelahanka	Byatarayanapura	Vidyaranyapura	Byatarayanapura	Bangalore North
10	Dodda Bommasandra	Yelahanka	Byatarayanapura	Vidyaranyapura	Byatarayanapura	Bangalore North

2. Venue Data: Foursquare APIs

	Ward Name	Ward Latitude	Ward Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Kempegowda Ward	12.9564316	77.5741194	Brahmins Coffee Bar	12.95398336	77.5688621	Breakfast Spot
1	Kempegowda Ward	12.9564316	77.5741194	VB Bakery	12.95168678	77.57712392	Bakery
2	Kempegowda Ward	12.9564316	77.5741194	Food Street	12.9509559	77.57779773	Snack Place
3	Kempegowda Ward	12.9564316	77.5741194	Hari Super Sandwich	12.94906313	77.57493508	Sandwich Place
4	Kempegowda Ward	12.9564316	77.5741194	Bangalore City Institute	12.9569247	77.57291529	General Entertainment
5	Kempegowda Ward	12.9564316	77.5741194	Karnataka Bhel House	12.95941243	77.56726435	Fast Food Restaurant

We will be using Venue Category to drive analysis.

