



## **CAPSTONE PROJECT - THE BATTLE OF NEIGHBOURHOODS**

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# INTRODUCTION

- **Mumbai city**
- **Business Problem :**
- The challenge is to find a suitable apartment for rent in Mumbai that complies with the demands on location, price and venues. The data required to resolve this challenge is described in the following section 2, below.
- **Success Criteria :**
- Best neighborhood which meets above criteria.



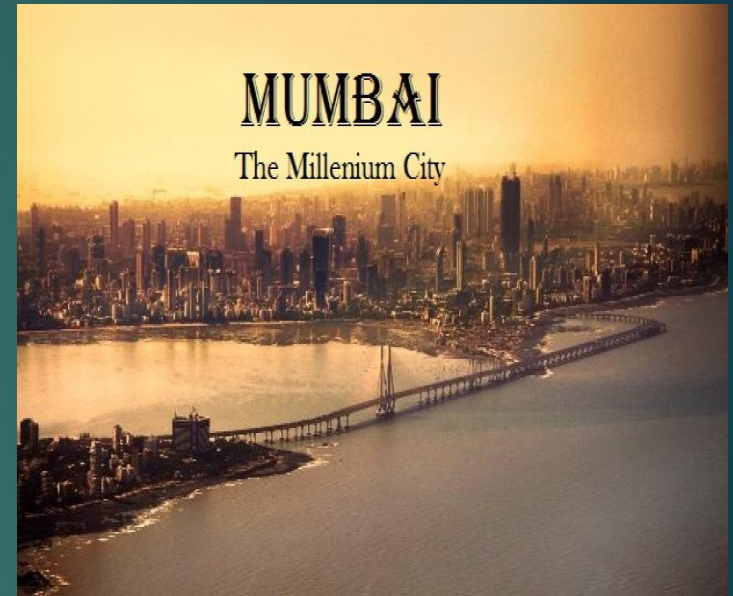
# MUMBAI City - Facts

## **1. India's first ever train ran between Mumbai and Thane**

On 16 April 1853, India's first train commenced its operation. Mumbai Locals are the busiest railways in the world and carry about 2.2 billion passengers every year. Mumbai also has the most obsolete electric rail chain in India, which was installed in 1925.

## **2. Mumbai was the first one to start a bus service in India**

It was on 15 July 1926, that the first ever bus service in India was started. The first route was ridden between Afghan Church and Crawford Market.





# Facts to Relocate to Mumbai

- List of Boroughs and neighborhoods of Mumbai with their geodata (latitud and longitud)
- List of Subway metro stations in Mumbai with their address location
- List of apartments for rent in Mumbai area with their addresses and price
- Preferably, a list of apartment for rent with additional information, such as price, address, area, # of beds, etc
- Venues for each Mumbai neighborhood ( than can be clustered)
- Venues for subway metro stations, as needed

# Solution to problem:

The data will be used as follows:

- Use Foursquare and geopy data to map top 10 venues for all Mumbai neighborhoods and clustered in groups ( as per Course LAB)
- Use foursquare and geopy data to map the location of subway metro stations , separately and on top of the above clustered map in order to be able to identify the venues and ammenities near each metro station, or explore each subway location separately
- Use Foursquare and geopy data to map the location of rental places, in some form, linked to the subway locations.
- create a map that depicts, for instance, the average rental price per square ft, around a radius of 1.0 mile (1.6 km) around each subway station - or a similar metrics. I will be able to quickly point to the popups to know the relative price per subway area.
- Addresses from rental locations will be converted to geodata( lat, long) using Geopy-distance and Nominatim.
- Data will be searched in open data sources if available, from real estate sites if open to reading, libraries or other government agencies , etc.



The processing of these DATA will allow to answer the key questions to make a decision:

- what is the cost of rent (per square ft) around a mile radius from each subway metro station?
- what is the area of Mumbai with best rental pricing that meets criteria established?
- What is the distance from work place and the tentative future home?
- What are the venues of the two best places to live? How the prices compare?
- How venues distribute among Manhattan neighborhoods and around metro stations?
- Are there tradeoffs between size and price and location?
- Any other interesting statistical data findings of the real estate and overall data.

# CONCLUSION

- Analysis performed on limited data Re-run program with updated information
- Relocation to new city such as Mumbai is getting easier.

