Coursera

IBM Applied Data Science Capstone

Finding a Dream Home in Mumbai, Maharashtra

By

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Finding a Dream Home in Mumbai, Maharashtra

Introduction

Mumbai is one of the most colourful cities of India and also the financial and entertainment capital of India. Gateway of India is the symbol of Mumbai. It is also known as the city that never sleeps. Mumbai is the perfect blend of culture, customs, and lifestyles. Mumbai is also dotted with plenty of architectural landmarks from the Victorian era and the days of Raj. Mumbai is also the birthplace of Indian Cinema.Located on Maharashtra's coast, Mumbai is India's most-populous city, and it is one of the largest and most densely populated urban areas in the world.

Mumbai is the second most-populous in the world. Many people from different states come to Mumbai for business and jobs. In this big city, everyone wants their own house to live a comfortable life and have a sweet memory with their house. But house hunting in this big city will make you tired and difficult. This project will give a detailed analysis of all the infrastructure in mumbai.

Bussiness Problem

The objective of this capstone project is to analyse and select the best locations in the city of Mumbai, Maharashtra to purchase/rent a new house. Using data science methodology and machine learning techniques like clustering, this project aims to provide solutions to answer the business question: In the city of Mumbai if a person wants to purchase/ rent a new house, where would you recommend that they purchase it?

Target Audience

This project is particularly useful to every individual / investors looking to purchase/rent or invest in House in Mumbai. The purpose of this project is to help people in exploring better facilities around their neighborhood. It will help people making a smart and efficient decision on selecting great neighborhoods out of numbers of other postal areas in Mumbai, India.
It will help people to get the awareness of the area and neighborhood before moving to a new city, state, country, or place for their work or to start a new fresh life.

Data

To solve the problem, we will need the following data:
1. List of neighbourhoods in Mumbai.
2. Latitude and longitude coordinates of those neighbourhoods. This is required in order to plot the map and also to get the venue data

Sources of data and methods to extract them

This Wikipedia page https://www.mapsofindia.com/pincode/india/maharashtra/mumbai/ contains a list of neighbourhoods in Mumbai. We will use web scraping techniques to extract the data from the Wikipedia page, with the help of Python requests and beautifulsoup packages. Then we will get the geographical coordinates of the neighbourhoods using Python Geocoder package which will give us the latitude and longitude coordinates of the neighbourhoods. After that, we will use Foursquare API to get the venue data for those neighbourhoods. Foursquare has one of the largest database of 105+ million places and is used by over 125,000 developers. Foursquare API will provide the top 100 infrastructure in each neighborhood.