IBM Data Science Capstone Project

Exploring Infrastructure and Neighborhood in Mumbai

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Introduction:

Mumbai, traditionally known as Bombay, is the commercial capital of India [1]. It is the second-most populous city in India. It has a highly diversified infrastructure. It is also known as the center attraction of Bollywood cinema.

Despite various infrastructure, Mumbai suffers from air and water pollution, widespread areas of substandard housing, and overcrowding [2]. It is always difficult to identify a prosperous area in Mumbai.

This project will help any newcomers in exploring Mumbai City and its neighborhood. It will help people to make a decision for finding the best infrastructure place to stay in the city.

Every year's millions of people migrate from different parts of India to Mumbai for finding new opportunities and a better life [3]. It will help individuals to acquaint themselves with the city and neighborhood.

Problem Statement:

In this project I would like to answer the following questions.

1. Visualize the Mumbai

2. Identify the best infrastructure locations in Mumbai

3. Identify the potential areas for future development in Mumbai

4. Identify the city locations with poor infrastructure in Mumbai

5. Identify the best place to live within Mumbai

Data

I will use following data of the Mumbai.

- Pin code : https://mumbai7.com/postal-codes-in-mumbai/. It has city, postal office, and pin code information's. Latitude and longitude information are added using google map manually.

- Different kinds of infrastructures in each neighborhood of Mumbai City: Foursquare API

Method

I will use Foursquare API to get all venues in each postal office in Mumbai. Following are the main steps to address our problem.
1) Data cleaning
2) Data wrangling and map visualization
3) K-means clustering to identify the neighborhood

References

1. https://en.wikipedia.org/wiki/Mumbai#:~:text=Upon%20India's%20independence%20in%201947,the%20entertainment%20capital%20of%20India.

2. https://www.britannica.com/place/Mumbai

3. https://www.gatewayhouse.in/how-mumbai-became-a-magnet-for-migrants/