

Neighborhood Similarity Analysis of Mumbai & Delhi

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IBM Capstone Project

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Introduction

While both Mumbai and Delhi are pretty famous among its residents, they are as similar as one can imagine them to be. One is the country's very capital and the other the commercial capital. One is called the heart of India while the other the soul. Both have diverse cultures, diverse languages, diverse people and diverse appeals for the residents.

Before you move to a city, it can be hard to tell the character of individual cities. The sheer size and population of the Indian cities can be overwhelming, and for some it might be tempting to paint all busy centers with the same brush. But in reality, you can have drastically different experiences depending on where you visit. Mumbai and Delhi epitomize this: one's a modern, cosmopolitan and commercial center while the other, in places, feels like a gateway to a bygone era. Here, we let Data decide the similar neighborhoods based on the surrounding amenities between Delhi and Mumbai.

Mumbai and Delhi are the two most important metro cities in India. There has been a war for supremacy in terms of quality of life, jobs, education, entertainment and recreational facilities that these cities have to offer to its residents. This project elaborates on a data science project that attempts to analyze the neighborhoods in each of these two cities and tries to understand what is popular in them and what they have to offer to someone who is contemplating to make a choice on seeking a life in either of the metro cities.

The deciding factor for most would be on how lively, supportive, vibrant and unique each of the cities can be when compared to each other. The business problem in this study assumes that people who would be interested in this study are those who would like to create a projection of potential life and activities in these metro city neighborhoods if the subject moves to live in one of them. The decision to choose one over the other would depend on popular venues in the neighborhoods in each of these metro cities.

Data Description

For any “data science project” data is of paramount importance. For this study, we needed data about neighborhoods in each of these metro cities. To consider the problem we can list the data’s as below:

- **Mumbai:** <https://www.mapsofindia.com/pincode/india/maharashtra/mumbai/>.
- **Delhi:** <https://www.movingsolutions.in/blog/2020/02/05/pin-codes-of-delhi-locations/>.
- I used **Foursquare API** to get the most common venues of given Neighborhood of Delhi and Mumbai.
- I will use the **Nominatim** library from **geocoders.geopy** package to find the longitude and latitude for each of the neighborhoods.