Coursera Capstone

IBM Applied Data science

Title: Battle of Neighborhoods

"Opening A New Restaurant in Mumbai, India"

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INTRODUCTION

According to a report, the restaurant industry in India is growing at the rate of 7% of which the organized sector is growing more rapidly at 16% as compared to the unorganized sector. Out of the 1.5 million eating outlets, only a very small fraction of outlets is part of the organized sector. The organized segment is slated to reach Rs.22, 000 crore by 2017. Quick service restaurants will show maximum growth followed by casual dining, cafes and fine dining. Most Indians eat out only twice a month and if they eat out just a little more often, the market opportunity will increase tremendously. Mumbai has alone 1500+ licensed restaurants. The restaurant business is all set to reach new heights with the rise in disposal incomes, nuclear families and increase in working population.

The location of your food service business will impact its success nearly as much as the menu. If your restaurant is in the wrong place, you won't attract the number of customers you will need in order to stay in business. The same is true if your location is inundated with competitors, or has poor visibility, or is hard to find. There are many things that must be considered as you look for a location in which to open your business.

Problem Statement

The location is one of the most important parameters to consider while discussing the idea as it can surely determine the success of the business. The Aim of this capstone project is to analyse and select the best locations in the Mumbai city, India to open a new restaurant. Using data science methodology and machine learning techniques like clustering, this project aims to provide solutions to answer the business question: In the Mumbai city of Maharashtra, India, if any individual person or group are looking to start their restaurant business and want to open a new restaurant, where would you recommend them to open it?

Target Audience of this project

Any individual or group of people who want to open a new restaurant in Mumbai city and are finding a suitable location for their business.

DATA DESCRIPTION

Mumbai City District is a district of Maharashtra in Konkan Division. As a city district, it has no headquarters or subdivisions. It, along with the Mumbai Suburban District, makes up the metropolis of Mumbai. The city area is called the "island city" or South Mumbai or Old Mumbai. It extends from Colaba in the south to Mahim and Sion in the north. The city has an area of 157 km² and a population of 3,085,411.

Data Sources

Data of postal code and areas of Mumbai districts is taken from

https://www.mapsofindia.com/pincode/india/maharashtra/mumbai/

Latitude and longitude data of all the areas is fetched using google's api and python geocoder ibrary.

The Restaurant data of each neighbourhood is taken using foursquare api.

To generate map python's geopy library is being used.