Coursera Capstone

IBM Applied Data Science Capstone

Opening of a new Indian food restaurant in Pune city

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1. Introduction

"People who love to eat are always the best people". [1]

Restaurants are where we always go to eat. These are the places where we eat peacefully. Try new dishes, cuisines. In India, people love to eat Indian food. Why? Because India is a diversified country. Each state has different dishes, different tastes. Hence you will find Indian restaurant all over the places. As expected, Pune city has so many Indian food restaurants. Hence to open a new restaurant, an analysis must be done.

The objective of this project is to analyse and get the best suitable location to open an Indian food restaurant in Pune city. For this analysis machine learning technique like clustering.

Problem Statement- "Best suitable location to open Indian food restaurant in Pune city."

So, **the target audience** for this project is a businessman who is willing to invest in any location regardless of property cost. Or for someone who is trying to extend his Indian food restaurant chain in Pune city. For small investors this may not be a good idea.

2. Data and Methodology

Data from following sources will be used:

- List of neighbourhoods from *Wikipedia* [2]
- Coordinates (Geocoder Python) using *OpenStreetMaps*
- Restaurant venues using *Foursquare API* [3]

Now, usage of this data will be explained:

i. From Wikipedia page, we will get the list of neighbourhoods. For this process, BeautifulSoup Python library will be used. Using these neighbourhoods will be added in the list and later into a data frame.

ii. Geocoder in Python will be used to get coordinates of the neighbourhoods. Coordinates will be joined with neighbourhoods into the data frame.

iii. Now using Foursquare API we will get a list of venues and their category.

iv. Data cleaning will be done at all stages whenever required.

v. Also, data visualisation will be done using Folium maps, a Python library.

vi. Machine Learning technique clustering will be used to get results.

3. References:

[1]   The All-Time Greatest Quotes About Food And Eating:
        https://www.delish.com/food/g25438962/food-quotes/

[2]   List of neighborhoods in Pune:
        https://en.wikipedia.org/wiki/List_of_neighbourhoods_in_Pune

[3]   Foursquare Developers:
        https://developer.foursquare.com/