

Opening of a new Indian food restaurant in Pune city

COURSERA CAPSTONE

IBM APPLIED DATA SCIENCE

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Outline

- Business Problem
- Data
- Methodology
- Result
- Discussion
- Conclusion and Recommendation

Business Problem

- Location of restaurant, specifically Indian food restaurant need to be open in Pune city
- Objective is to analyse best suitable location for India food restaurant
- Problem Statement is:

“Best suitable location to open Indian food restaurant in Pune city.”

- The target audience for this project is a businessman who is willing to invest in any location regardless of the 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.

Data

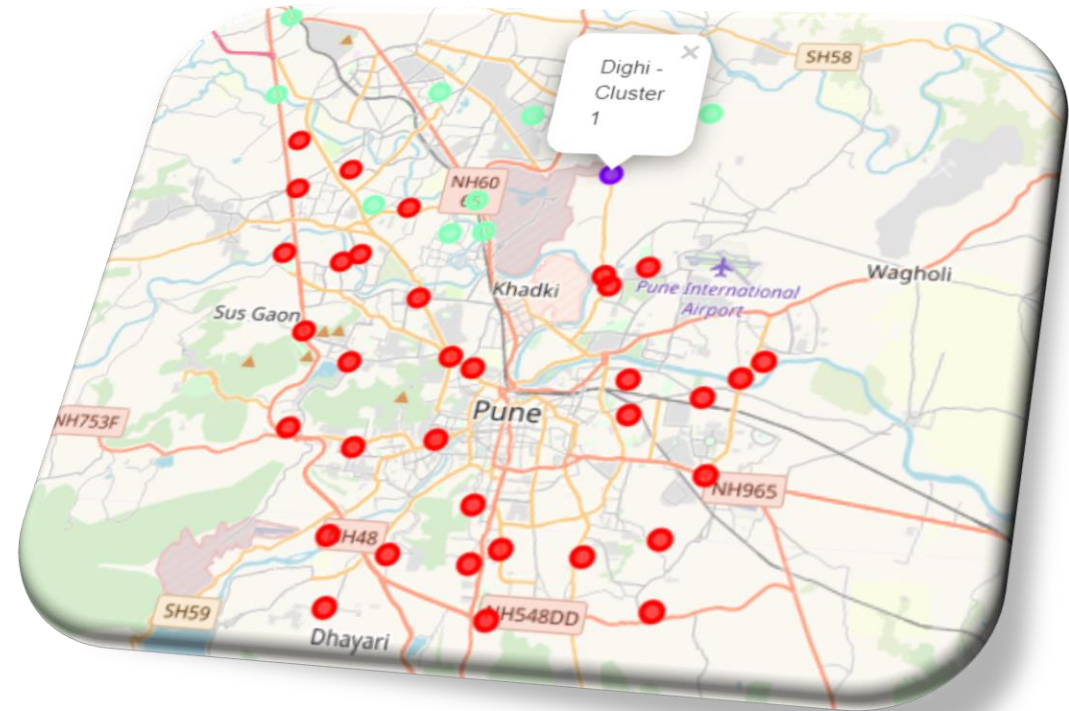
- List of neighbourhoods from *Wikipedia*.
- Coordinates (Geocoder Python) using *OpenStreetMaps*. But I have decided to shift to *HERE*^[4] maps API for better accuracy.
- Restaurant venues using *Foursquare API*

Methodology

- From Wikipedia list of neighbourhoods will be generated
- Using Geocoders their co-ordinates will be obtained.
- Zipping both together we will plot them on map using Folium maps.
- Then for all neighbourhoods venues will be captured using Foursquare.
- From that data only Indian Restaurant category will be used.
- We use K-means clustering machine learning process and obtain the result.
- Result can be seen on map.

Result

- Cluster 0: Neighbourhoods with a moderate number of shopping malls in red colour
- Cluster 1: Neighbourhoods with a low number to no existence of shopping malls in purple colour
- Cluster 2: Neighbourhoods with a high concentration of shopping malls in light green colour



Discussion

- Pune city has so many Indian food restaurants located all over the places.
- A moderate number of restaurants can be found all over the Pune city i.e. Cluster 0. A very high number of restaurants are in little outskirts. Probably, there was pretty much free or open space previously i.e. Cluster 2.
- Hardly any restaurant can be seen in Cluster 1. So if anyone wants to open a new restaurant Cluster 1 is the best suitable location.
- Also, those who are trying to extend their food chain restaurant, they can also invest in Cluster 0. But investor/businessman is highly suggested to avoid Cluster 2 since they will have intense computation already.

Conclusion and Recommendation

- Ultimately suggestion has given to open a new Indian food restaurant in Pune city.
- It is concluded that the following areas as shown in the image are the best areas to open a new Indian food restaurant.
- Hence Dighi is the only recommended location for new businessman.

	Neighborhood	Indian Restaurant	Cluster Labels	Latitude	Longitude
13	Dighi	0.8	1	18.61522	73.87241

Thank You

