

An insight into the Italian Cuisine favored localities in Hyderabad

The Capstone Project- The Battle of Neighbourhoods

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Background

- ▶ Hyderabad being one of the metropolitan cities of India has a population of about 9.7 million people [1]. Influenced by the Mughal rule, the Nizams city is known for an amalgam of South Indian and Mughals cuisines. The city of food lovers was listed as “creative city of gastronomy” by UNESCO [1]. Well known hyderabadi haleem and biryani carry the National Geographical Indications tag. Not just the Mughals, its cuisine has a great influence from the turkish, local telugu, Iranian and Marathwada cuisines [1].
- ▶ Though there are varied cuisines preferred by the localites, the city is still adapting to the food influences from other far off countries such as Italy, Mexico, Korean, Chinese etc. To open an Italian restaurant in Hyderabad, it needs some in depth analysis of the current Italian restaurants in the cities and their localities to find out an ideal place to open a new Italian restaurant which can attract enough customers.

[1] <https://en.wikipedia.org/wiki/Hyderabad>

Problem

- ▶ This analysis is being carried out to find out the areas in the city that have Italian restaurants, most favoured food items from these restaurants and ideal costs per two according to the locality. This analysis will help in zeroing in on an ideal place to open an Italian restaurant that would be accepted by the people living in those neighbourhoods.

Data

- ▶ For this analysis, I am considering the restaurant data in India from the Kaggle datasets (<https://www.kaggle.com/ngokulakannan/zomato-india-restaurants2-lakh-restaurants-data>).
- ▶ The dataset has already information on the restaurants, area, latitude, longitude, favoured item, rating, etc.
- ▶ To find the nearby neighbourhoods, I will be using the Foursquare location data. By using this api I will get all the venues in each neighborhood.

Methods

Data Cleaning

- ▶ From the dataset, only restaurant data of Hyderabad was selected and written into a new dataframe. Also columns that were not required for the analysis were dropped from the dataframe.

Exploratory Data Analysis

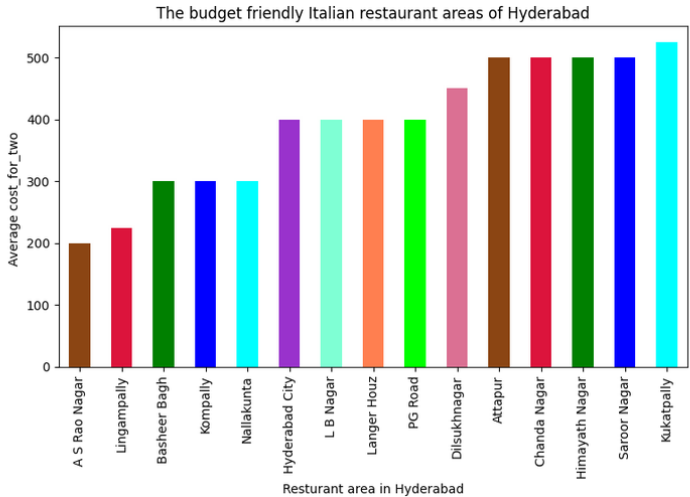
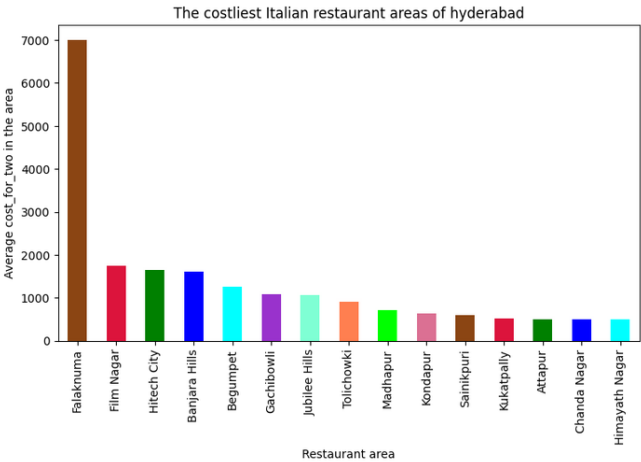
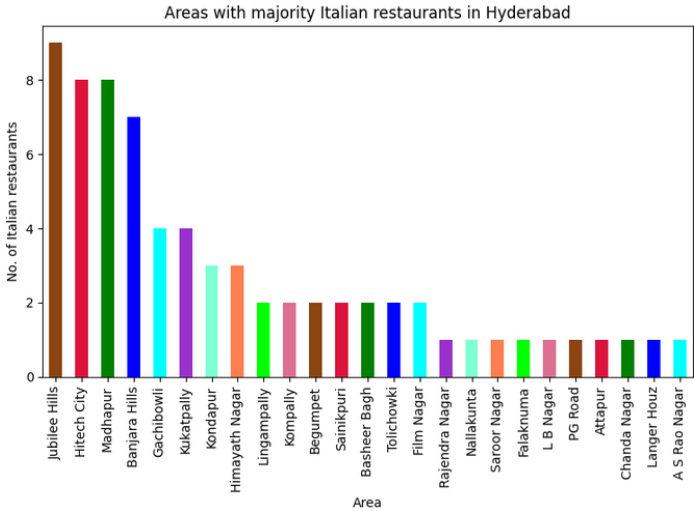
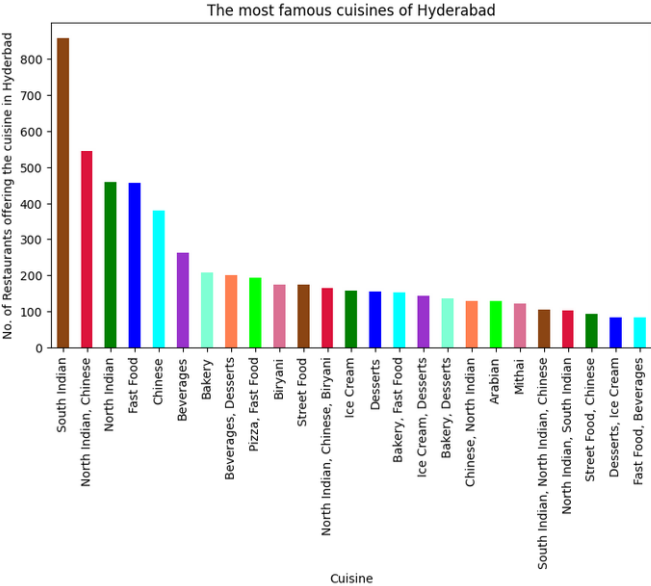
- ▶ The following questions were answered using the exploratory data analysis
- ▶ What are the most famous cuisines available in Hyderabad restaurants?
- ▶ What are the major areas with Italian restaurants?
- ▶ Which areas have costly Italian restaurants?
- ▶ Which areas have budget friendly Italian restaurants?

Methods

Modelling

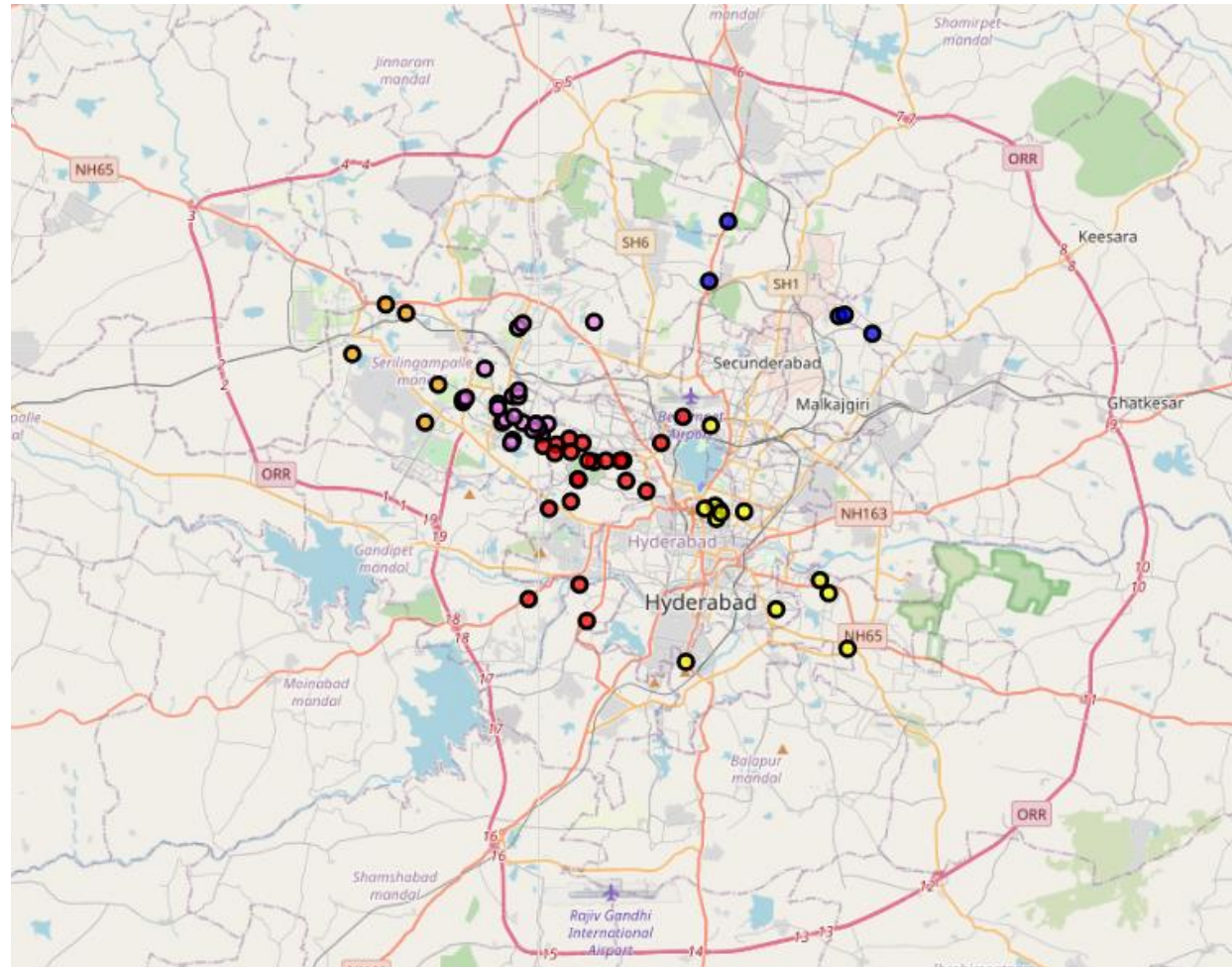
- ▶ The following analysis was further performed on the areas with Italian restaurants. The analysis can be found [here](#).
- ▶ Used FourSquare API to find out all venues for each of the areas with Italian restaurants .
- ▶ Filtered out all venues that are nearby by locality and then selected only restaurant related venues for further analysis
- ▶ Extracted the five most common restaurant venues for each of the areas
- ▶ Performed k-means clustering to cluster these areas based on the above data
- ▶ Visualized the clusters of areas with Italian restaurants using folium library(python)

Results



Results

Clusters of Italian Restaurants in the city



Results

Cluster 1

	latitude	Avg_rating	Avg_cost_for_two	Cluster	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
13	17.459273	3.2000	633.333333	0	Indian Restaurant	BBQ Joint	South Indian Restaurant	Vegetarian / Vegan Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	Chinese Restaurant	Asian Restaurant
15	17.340229	2.9000	400.000000	0	Indian Restaurant	Asian Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint
17	17.443618	3.6375	712.500000	0	Indian Restaurant	Asian Restaurant	Vegetarian / Vegan Restaurant	BBQ Joint	Afghan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant

Cluster 2

	latitude	Avg_rating	Avg_cost_for_two	Cluster	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
1	17.369098	NaN	500.0	1	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Indian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
6	17.371278	3.40	450.0	1	American Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Indian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint
8	17.416143	4.25	1750.0	1	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Indian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
14	17.485548	3.30	525.0	1	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Indian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
16	17.362136	2.60	400.0	1	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Indian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
19	17.440171	3.30	400.0	1	Chinese Restaurant	Indian Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	BBQ Joint	Asian Restaurant
20	17.352782	3.10	NaN	1	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Indian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
22	17.357896	3.30	500.0	1	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Indian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
23	17.404885	NaN	900.0	1	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Indian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant

Results

Cluster 3

	latitude	Avg_rating	Avg_cost_for_two	Cluster	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
21	17.489838	4.2	600.0	2	Falafel Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Indian Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant

Cluster 4

	latitude	Avg_rating	Avg_cost_for_two	Cluster	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
7	17.334312	4.4	7000.0	3	Italian Restaurant	Indian Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant

Cluster 5

	latitude	Avg_rating	Avg_cost_for_two	Cluster	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	17.481570	3.800000	200.000000	4	Indian Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
2	17.421390	4.114286	1607.142857	4	Indian Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
3	17.400793	3.200000	300.000000	4	Indian Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
4	17.438561	3.700000	1250.000000	4	Vegetarian / Vegan Restaurant	Indian Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
5	17.494734	3.400000	500.000000	4	Indian Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
9	17.402855	4.050000	500.000000	4	Indian Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
10	17.365123	3.600000	400.000000	4	Indian Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
11	17.433701	4.114286	1061.111111	4	Indian Restaurant	BBQ Joint	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	Chinese Restaurant	Asian Restaurant
12	17.518492	2.900000	300.000000	4	Indian Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant
18	17.401493	NaN	300.000000	4	Indian Restaurant	Vegetarian / Vegan Restaurant	South Indian Restaurant	Multicuisine Indian Restaurant	Mediterranean Restaurant	Italian Restaurant	Falafel Restaurant	Chinese Restaurant	BBQ Joint	Asian Restaurant

Discussion

- ▶ It was observed by analyzing the famous cuisines of top restaurants in Hyderabad, Italian cuisine is yet to be accepted by the majority of the Hyderabadis. Nevertheless, further analysis has revealed that there are 72 Italian restaurants already established in the city.
- ▶ Areas such as Gachibowli, Jubilee hills, Banjara hills, Hitech city and Madhapur have the highest number of Italian restaurants. These areas are usually occupied by IT employees and upper middle class and rich people.
- ▶ While analyzing the average cost for two in these restaurants, it was observed that Falaknama, Film nagar, Hitech city, Banjara Hills etc have the costliest Italian restaurants in the city. Also, areas such as A.S.Rao Nagar, Bachupally, Lingampally and other few have budget friendly Italian restaurants
- ▶ Analyzing the most commonly visited restaurants in these and further clustering these areas have revealed the following information. People from all clusters except 4 show that Italian restaurants are only 6th or 7th most common venues. Cluster 4 has Italian restaurant as the first common venue.

Conclusion

- ▶ To open an Italian restaurant in Hyderabad comes with lots of risk value as people here still prefer local Hyderabadi, Indian and South Indian dishes. Though Chinese restaurants are also frequently visited in the city, Italian cuisine will take time to be adapted here. Establishing one will need a lot of marketing along with choosing a place where people are already favouring Italian restaurants. To establish a high end Italian restaurant, areas such as Falaknama, Gachibowli, Jubilee hills, Banjara hills and Hitech city can be chosen and the cost can be decided based on the average cost for two in these areas. Areas such as Bachupally, Lingampally and Kuakatpally can be chosen for budget friendly outlets.