

The Battle of neighborhood

Final Report

A. Business Problem

City of New York is the most populous and diverse city of the USA an entry point for immigrants in the country and infact rightfully earned the title of 'Melting pot' the city is a hub for financial services, Retail and many other industries, New York is also known for its vibrant art and culture scene, and has inhabitants from almost all parts of the globe, which results into a rich and diverse food and dining scene in the city which covers everything from Chinese, Indian, Mexican, Arabian, Italian, Lebanese, and lots more.

As an Indian immigrant in the city I would like to know what are the best neighborhoods in the city to have Indian food, or if a business wants to open an Indian restaurant which is the best possible neighborhood to consider.

In this analysis we will try to answer following questions

1. Best location in New York to have Indian cuisine
2. Which areas are potential market for Indian restaurants
3. Which is the best neighborhood to stay if you prefer Indian cuisine

B. Data used

For this analysis following data sources will be used

1. New York city data from https://cocl.us/new_york_dataset, this dataset contains information about New York city boroughs and neighborhoods with their latitudes and longitudes
2. Indian restaurant venue data, this data will be retrieved using foursquare venue API's and the dataset will include venue name, venue ID, category, tips, ratings, likes
3. Geospace data- to identify boundaries of neighborhoods and boroughs that will be used to visualize the choropleth maps, the data is sourced from <https://data.cityofnewyork.us/City-Government/Borough-Boundaries/tqmj-j8zm>

C. Methodology

- a. We begin by collecting data on New York boroughs, neighborhoods and their respective latitudes and longitudes
- b. Using Foursquare venues API we import the venue information for New York
- c. Filter the Indian restaurants across all neighborhoods
- d. Using the foursquare API import the data of ratings, tips, and likes for Indian restaurants
- e. Sort the data using rating as key
- f. Visualize the rankings using folium library and generating a choropleth map

D. Result

Now we can answer the questions that we had set out at the start of this exercise

- a. Best location in New York to have Indian cuisine
Astoria(Queens), Blissville(Queens), Civic Center(Manhattan) are some of the best neighborhoods for Indian cuisine
- b. Which areas are potential market for Indian restaurants
Manhattan
- c. Which is the best neighborhood to stay if you prefer Indian cuisine
Manhattan

E. Discussion

This solution can further be improved upon to zero down on the best location by overlaying following data points in the analysis

- a. Demographic distribution of New York population, the assumption being that a areas with high density of population originating from Indian sub-continent will have a larger demand for Indian restaurants
- b. Cross referencing with farmer market locations for the ease of supply of ingredients

With a cluster analysis including these two factors we can zero down on areas which will have a scope of opening a new Indian restaurant with respect to possible demand and easy and economic access to fresh ingredients.

F. Conclusion

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