

The Battle of Neighbourhoods

Capstone Project

Introduction

New York City's demographics show that it is a large and ethnically diverse metropolis. With its diverse culture, comes diverse food items. There are many restaurants in New York City, each belonging to different categories like Chinese, Indian, French etc.

So as part of this project, we will list and visualize all major parts of New York City that has great Indian restaurants.

Problem

A restaurant is a business which prepares and serves food and drink to customers in return for money, either paid before the meal, after the meal, or with an open account. The City of New York is famous for its excellent cuisine. Its food culture includes an array of international cuisines influenced by the city's immigrant history.

We want to find the answers to the following questions:

1. List and visualize all major parts of New York City that has great Indian restaurants.
2. What is best location in New York City for Indian Cuisine?
3. Which areas have potential Indian Restaurant Market?
4. Which all areas lack Indian Restaurants?
5. Which is the best place to stay if you prefer Indian Cuisine?

Data Selection

For this project we need the following data:

1. New York City data that contains list Boroughs, Neighbourhoods along with their latitude and longitude.
 - Data source : https://cocl.us/new_york_dataset
 - Description: This data set contains the required information. And we will use this data set to explore various neighbourhoods of New York City.
2. Indian restaurants in each neighbourhood of New York City.
 - Data source : Foursquare API
 - Description: By using the API we will get all the venues in each neighbourhood. Then filter to Indian restaurants
3. GeoSpace data
 - Data source : <https://data.cityofnewyork.us/City-Government/Borough-Boundaries/tqmj-j8zm>
 - Description: By using this geo data we will get the New York boundaries that will help us visualize a choropleth map.

Methodology

1. We begin by collecting the New York city data from the following link "https://cocl.us/new_york_dataset"
2. Then find all venues for each neighbourhood using Foursquare API.
3. Filter out all venues with Indian restaurants.
4. Next using Foursquare API, we will find the Ratings, Tips, and Number of Likes for all the Indian Restaurants.
5. We will then sort Neighbourhoods and Borough the data keeping Ratings as the constraint.
6. Next we will consider all the neighbourhoods with average rating greater or equal 9.0 to visualize on map.
7. We will join this dataset to original New York data to get longitude and latitude.
8. Finally, we will visualize the Neighbourhoods and Borough based on average Rating using python's Folium library