Applied Data Science using Python Capstone

The Battle of Neighborhoods: Part-2

Data Description and Problem Solving Approach

Introduction:

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

Required Data:

- **New York City data that contains list Boroughs, Neighborhoods 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 neighborhoods of New York City

- **Indian restaurants in each neighborhood of New York City:**
  - **Data source** : Foursquare API
  - **Description:** By using this API we will get all the venues in each neighborhood. We can filter these venues to get only Indian restaurants.

- **Foursquare API Data:**
  - We will need data about different venues in different neighborhoods of that specific borough. In order to gain that information we will use "Foursquare" locational information.
  - Foursquare is a location data provider with information about all manner of venues and events within an area of interest.
  - Such information includes venue names, locations, menus and even photos.
  - As such, the foursquare location platform will be used as the sole data source since all the stated required information can be obtained through the API.
  - After finding the list of neighborhoods, we then connect to the Foursquare API to gather information about venues inside each and every neighborhood.
  - For each neighborhood, we have chosen the radius to be 100 meter.
  - The data retrieved from Foursquare contained information of venues within a specified distance of the longitude and latitude of the postcodes. The information obtained per venue as follows:

    1. Neighborhood
    2. Neighborhood Latitude
    3. Neighborhood Longitude
    4. Venue
    5. Name of the venue e.g. the name of a store or restaurant
    6. Venue Latitude
    7. Venue Longitude
    8. Venue Category

- **GeoSpace data:**
  - **Data Source:** https://data.cityofnewyork.us/City-Government/BoroughBoundaries/tqmj-j8zm
  - **Description:** By using this geo space data we will get the New York Borough boundaries that will help us visualize choropleth map.