**The Battle of Neighborhoods**

**Introduction:** New York City is multicultural city with varied of food culture. Explore, analyze and provide suitable location for opening new restaurant to Foodie Inc.

**Business Problem description and background:** Foodie Inc. is an international restaurant chain looking to expand its operations in New York City. As New York city is the financial capital of the country with multicultural population, Foodie Inc needs help with finding a suitable neighborhood in New York City to open a their restaurant. Foodie Inc. requires insights on the restaurants present in the neighborhoods, most popular restaurants, frequency of people visiting the restaurants and compare it to crime reported in the neighborhoods. We need to provide report of the suitable neighborhood to start the restaurant.

**Data Description:**

**Data 1:** New York City has 5 Boroughs and 306 Neighborhoods. To segment, explore and analyze the neighborhoods we need to use a dataset that contains 5 boroughs and all its neighborhoods with latitude and longitude coordinates. Dataset exists for free in web.

Link to New York city dataset: <https://cocl.us/new_york_dataset>

**Data 2:**  Latitude and Longitude of New York city neighborhoods, from Data 1 will be used to retrieve popular venues in the area using Foursquare API. From the retrieved venues list, categories of type restaurants will be segregated and used for further analysis.

Link to Foursquare API: <https://api.foursquare.com/v2/venues/explore>

**Data 3:** Second data used for the analysis is the crime incidents reported in New York in the last one year. This dataset is available in web.

Link to Crime report: <https://data.cityofnewyork.us/Public-Safety/NYC-crime/qb7u-rbmr>

**Approach of data usage to solve problem:**

The New York City borough and neighborhoods data retrieved from Data 1 along with the latitude and longitude gives the list of neighborhoods to explore. Using the latitude and longitude coordinates as input to Foursquare API (Data 2), retrieve the details on restaurants in the neighborhoods. Now with the crime report available in Data 3 web link find the neighborhoods that have higher crime rate. Compare the crime rate higher neighborhood and the restaurants clusters and find the neighborhoods with the highest crime rate. Shortlist the neighborhood with the lowest crime rate and the frequency of restaurant is less.