**The Battle of Neighborhoods- Data Section (Week-1)**

**Data Sources**

***Geospatial data of the boroughs***

New York population is distributed into 5 boroughs and 306 neighbourhoods. To explore the data, we need to get the access to the data containing the boroughs and their geospatial coordinates. I downloaded the data freely available from the website

[**https://geo.nyu.edu/catalog/nyu\_2451\_34572**](https://geo.nyu.edu/catalog/nyu_2451_34572)

in geojason format. This data will be transformed into Pandas data frame for easy data analysis and visualization.

***Venue data for Thai restaurants, Ratings and Tips***

Foursquare API would be used to get the information about venues with filtering applied to find the Thai restaurants. Graphical representation of number of boroughs vs number of Thai restaurants and neighbourhoods plotted against number of Thai restaurants would give us a fair idea about the distribution of the restaurants.

Foursquare data will also be used to retrieve the information about rating and amount of average tips that will help us to fulfil the requirement as stated in the problem description for the location of both upbeat and affordable restaurants.

The recommendation for the location of both restaurants will be plotted and viewed on the folium based maps within Jupyter notebook.

**Methodology**

Various data analysis and plotting libraries and algorithms will be used during the course of the capstone project.

Pandas for data cleaning, analysis and statistical plots. Possible use of seaborn and plotly where deemed necessary for high quality graphics.

Numpy will be used to handle the data in vector format

Folium and geopy will help us plot the geospatial data on the maps with street layer in the background and the location of neighbourhood and resturants as a foreground layer

The top locations for the both the resutrants will be selected based on the client crietera.

Highest tips and ratings for upbeat resturant

Neighborhood with low number of resturants for affordable and express version of the resturant.