

Capstone Project: Instructions (week 1 part (2))

For this week, you will be required to submit the following:

- A description of the data and how it will be used to solve the problem

Data Description and how it will be used to solve the problem

1. Data sources and description of the data :

- The best method is to analyse postal code or zip code.

We focus on the state of Massachusetts, **Suffolk** and we list their cities and towns as below:

```
array(['Hampden', 'Hampshire', 'Worcester', 'Berkshire', 'Franklin',  
      'Middlesex', 'Essex', 'Norfolk', 'Plymouth', 'Bristol',  
      'Suffolk',  
      'Barnstable', 'Dukes', 'Nantucket'], dtype=object)
```

Each zip code will have latitude and longitude value assigned to a city and each city can have multiple zip codes then, the result will be grouped by city which will be neighborhood, **Suffolk** will refer to city.

DataLink : <https://simplemaps.com/data/us-zips>

- The second data set will be the venue data.

Details on the venues will be derived from [Foursquare.com](https://foursquare.com) website via an API to the application.

Foursquare provides a rough guide on the types of cuisine according to a predefined set of categories as documented on its website <https://developer.foursquare.com/docs/resources>.

While it also returns the venues' frequency by neighborhoods which is defined by their zip codes and their respective latitude and longitude.

2. Analytical Methods

- Understanding the distribution of Asian restaurants in a particular location reflects the population's distribution
- Any singleton cluster in the map derive acceptance rates and opportunities for growth (increase number of Asian restaurants), or the type of area which haven't a dynamic workers or industries companies

3. Interpretation of results

- If a town has a high volume of Asian restaurants, it could mean that the market is moving towards saturation (saturation zones).
- If an area has a very low count of Asian restaurants, it could mean that no Asian people in this radius or a poor town