Course:

# IBM Applied Data Science Capstone

## Survey for opening snacks joint in Mumbai Neighbourhoods, India

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**Aug 2020**

**Business Problem:**

This Capstone is intended to analyse and fetch the appropriate location in Mumbai's Neighbourhood which will be suitable to open a food joint for business man who don't want to invest huge amount as required to start Restaurants but still want to earn well.

Basically need is for small food joint, food truck, take away counters etc.

# Background:

People in India love to have different variety of food especially when they are roaming /travelling outside may it be alone, with family or friends.

Usually people travel using public transport (Trains and Buses) for work, as it is known fact that Mumbai is financial capital of India and it has many immigrants from various states of India. Most of the people uses Local trains to commute from one place to another and likes to have some quick food near the station which is cheap and best.

Mumbai has lot of tourist places such as Beaches, Film City, Zoo, Temples, Marine drive etc. which attracts huge crowds on weekends along with enjoying the places they are also found of some yummy food to satisfy their taste buds.

This business of small fast food joint, Food Truck, Chaat items has a lot of potential provided the selection of Area is appropriate.

Proper Area with lot of crowd will make sure the food joints will make a quite good business.

**Target Audience:**

1. Business minded people those who are interested to do side hustle on weekends.
2. Young college students who wants to try their luck in food business.
3. People who can cook very well but are low on budget.
4. People who make pickles and other preserved food stuff at home and want to sell it.
5. People who want to expand their food chains in different areas can start off with small investment, it will make it clear if their food is accepted in different areas.

**Data Requirement:**

1. List of Mumbai's Neighbourhood:
   This will help to identify the neighbouring areas with which further analysis can be done

2. Latitude and Longitude of Neighbouring areas:
   This is required to plot areas on map and also for getting the venues in these areas.

3. Venues in each Neighbourhood:
   This is the most important data, as this will get the insights of the places where crowd is attracted.

   **Data extraction and Usage of data to solve the problem:**

Data will be extracted by using following websites

- Wikipedia: To get the list of neighbouring areas of Mumbai along with its Latitude and Longitude, it will be extracted by using python web scrapping ( using pandas)

- Foursquare.com: This site will help us to extract venues for each neighbouring area, data will be extracted by using foursquare API

## Usage of Data:

- Once we extract the data, we will merge both the data mentioned above  and make the DataFrame using pandas
- Now we will have Neighbouring Area and Venue category along with their co-ordinates
- Will filter out the Venue categories based on the fact if they are tourist place or Station, as these are the places with huge crowd.
- Will wrangle the data if required
- In the new filtered dataset will apply machine learning algorithm to find the clusters using K-means cluster.
- Each cluster will gives us insight about the areas suitable for opening food joints
- Based on cluster wise insights, decision is to be taken to select appropriate location