**Introduction: Business Problem**

This project deals with analysing the neighborhoods of Chennai, which would help people who want to start Restaurants, Cafes, etc. The Foursquare API is used to access the venues in the neighborhoods.

These venues are using the k-means clustering algorithm and Folium map is used to visualize the clusters superimposed on the map of Chennai.

**Target Audience:**

The target audience is anyone whoplanning to start their food business at a location in Chennai. This project would help them find the optimal location based on the category of their business such as,

* How restaurants are spread out in Chennai
* The best location to start new restaurants in Chennai

**Data****:**

The wikipedia page of Chennai neighborhoods- <https://en.wikipedia.org/wiki/List_of_neighbourhoods_of_Chennai> , has been used to obtain the neighborhoods with its latitude and longitude positions.

**Methodology**

Foursquare obtaines around 870 venues for 176 neighborhoods.

We use:

- one hot encoding on the obtained data set

- K-means clustering

**Analysis**

By analysing the dataset, we got our top 10:

* Cluster that are crowded
* Venues
* Venue Categories
* Neighborhoods where these venues are present

**Conclusion**

Neighbourhoods in Cluster 1,2 and 4 might be good to start a hotel/restaurant as the density of such venue categories is much less compared to other regions