

# Coursera Capstone

IBM Applied Data Science  
Capstone

# Where to Open Fast Food Restaurant, LA

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# Business Problem

- ❖ A group of investors started a small Fast food restaurant chain in Alabama. One of the decisions made during last business strategy company meeting was to confirm a plan to establish and deploy new stores on the west coast via launching stores in Los Angeles. As a consequence, a first pilot project is launched, and Raymond, project leader was nominated with first objective to launch 10 new stores in Los Angeles, CA. The success of this initiative is crucial for the next phases of the project and for the development of additional stores. Among Raymond's key tasks, he needs to work with a real estate consultant to identify available venues in Los Angeles and close relevant deals as soon as possible to deploy the stores.

# Data

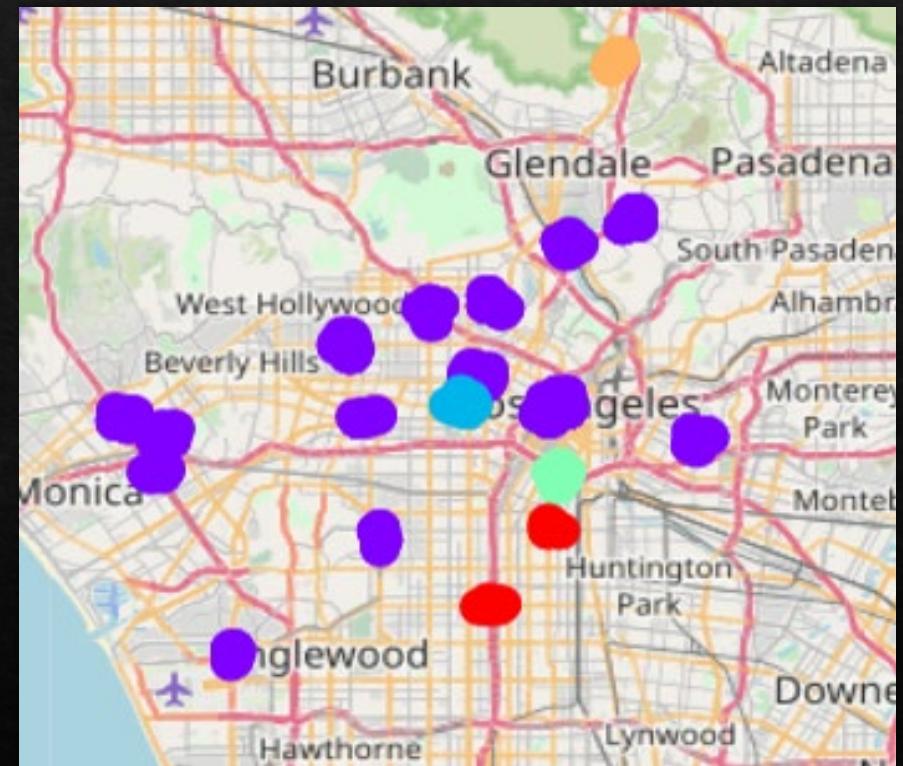
- ❖ Data was acquired from [Datafiniti's Business Database](#).
- ❖ Apart from that I also took dataset for State codes; and
- ❖ The population dataset of the states (both from Google)

# Methodology

- ❖ Data Cleaning to remove duplicates and Null values
- ❖ Use Foursquare API to get venue data
- ❖ Group data by neighborhood and taking the mean of the frequency of occurrence of each venue category
- ❖ Perform clustering on the data by using k-means clustering
- ❖ Select top 3 most visited venues in the neighborhood for understanding the vibe of the neighborhood.
- ❖ Visualize the clusters in a map using Folium

# Results

- ❖ Cluster 0 (red) - Good for Fast-food restaurants
- ❖ Cluster 1 (Purple) - Excellent for Fast-food restaurants
- ❖ Cluster 2 (sky blue) - Moderate for Fast-food restaurants
- ❖ Cluster 3 (neon green) and 4 (yellow) - Not good for Fast-food restaurants



# Discussion

- ❖ Most of the Fast-food restaurants are concentrated in the central area of the city
- ❖ Highest number in cluster 1 followed by cluster 0
- ❖ Clusters 3 and 4 have very low number of Fast-food restaurants in the neighborhoods
- ❖ Oversupply of Fast-food restaurants mostly happened in the central area of the city, with the suburb area still have very few Fast-food restaurants, but this mostly comes down to the foot-fall of LA.

# Conclusion

- ❖ Answer to business question: The neighborhoods in clusters 0 and 1 are the most preferred locations to open a new Fats-food restaurants
- ❖ Findings of this project will help the relevant stakeholders to capitalize on the opportunities on high potential locations with great foot-fall while avoiding deserted areas in their decisions to open a new Fats-food restaurant.