**Introduction: Business Problem**

Los Angeles is the most populous city in California and the second-most populous city in the United States. It is the cultural, financial, and commercial center of Southern California. The city is known for its Mediterranean climate, ethnic diversity, Hollywood, the entertainment industry, and its sprawling metropolis.

Having lived in LA for over a year now, I can confirm that it is also one of the most amazing places to eat, thanks to an incredible variety of international cuisines and some of the most talented chefs in the world. LA’s thriving economy, multicultural demographic, access to ingredients, and great seasonal produce makes it an ideal place for restaurants to flourish.

The objective of this project is to identify the best potential neighbourhoods where a restaurant can be set up. An international YouGov study of more than 25,000 people in 24 countries found that pizza and pasta are among the most popular foods in the world, as Italian cuisine beats all comers. According to their analysis, 88% of people surveyed in America liked Italian food. Keeping this in mind, the focus of this capstone would be Italian restaurants. Therefore, the analysis and results of this project would interest stakeholders who are interested in **opening an Italian restaurant in Los Angeles**.

Since there are innumerable restaurants in LA, neighbourhoods that are notalready congested with restaurants would be picked out first. The subsequent filter would be neighbourhoods with the least number of Italian restaurants in its vicinity. Neighbourhoods that are closer to the city centre would then be favoured. Neighbourhood rent is another factor that would be taken into consideration.

**Data**

Based on the criteria specified above, the factors that will influence the final decision are: -

* **Number of existing restaurants in the neighbourhood (any type of restaurant)**
* **Number of and distance to Italian restaurants in the neighbourhood**
* **Distance of neighbourhood from city centre**
* **Average neighbourhood rent**

The following data sources will be needed to extract/generate the required information: -

* List of all neighbourhoods in LA — <https://en.wikipedia.org/wiki/List_of_districts_and_neighborhoods_of_Los_Angeles>
* Coordinates of all neighbourhoods and venues — GeoPy Nominatim geocoding
* Number of restaurants and their type and location in every neighbourhood — Foursquare API
* LA rent data — <https://www.rentcafe.com/average-rent-market-trends/us/ca/los-angeles/>

<https://jp-tok.dataplatform.cloud.ibm.com/analytics/notebooks/v2/8a834e45-b7cd-41bb-97d2-a2a747fd0d2c/view?access_token=6bf2f41d17fb979d3b9d9ee28bab69541d04afbfd14e6e7d088b2c8f96106a7f>

<https://medium.com/analytics-vidhya/the-battle-of-the-neighbourhoods-la-edition-152edcc72c53>

<https://github.com/Soumya44/Coursera_Capstone/blob/master/Final%20Report.ipynb>

<https://github.com/Jaya738/Coursera_Capstone/blob/master/Capstone%20Project%20-%20The%20Battle%20of%20Neighborhoods.md>

<https://github.com/gnokit/Coursera_Capstone/blob/master/Capstone%20Project%20-%20The%20Battle%20of%20Neighborhoods%20-%20Final.ipynb>

<https://github.com/AragondaJyosna/Applied-Data-Science-Capstone/blob/master/The%20Battle%20of%20Neighborhoods_Presentation.pdf>

<https://github.com/kunal-chhabra/Coursera_Capstone/blob/master/The%20Battle%20of%20Neighborhoods.pdf>

**Capstone Project - The Battle of Neighborhoods**

**Introduction**

New York City's demographics show that it is a large and ethnically diverse metropolis. It is the largest city in

the United States with a long history of international immigration. New York City was home to nearly 8.5 million

people in 2014, accounting for over 40% of the population of New York State and a slightly lower percentage of

the New York metropolitan area, home to approximately 23.6 million. Over the last decade the city has been

growing faster than the region. The New York region continues to be by far the leading metropolitan gateway for

legal immigrants admitted into the United States.

Throughout its history, New York City has been a major point of entry for immigrants; the term "melting pot" was

coined to describe densely populated immigrant neighborhoods on the Lower East Side. As many as 800

languages are spoken in New York, making it the most linguistically diverse city in the world. English remains

the most widely spoken language, although there are areas in the outer boroughs in which up to 25% of people

speak English as an alternate language, and/or have limited or no English language fluency. English is least

spoken in neighborhoods such as Flushing, Sunset Park, and Corona.

With it's diverse culture , comes diverse food items. There are many restaurants in New York City, each belonging

to different categories like Chinese , Indian , French etc.

So as part of this project , we will list and visualize all major parts of New York City that has great Indian

restaurants.

**Data ¶**

For this project we need the following data :

New York City data that contains list Boroughs, Neighborhoods along with their latitude and longitude.

Data source : https://cocl.us/new\_york\_dataset

Description : This data set contains the required information. And we will use this data set to explore

various neighborhoods of new york city.

Indian resturants in each neighborhood of new york city.

Data source : Fousquare API

Description : By using this api we will get all the venues in each neighborhood. We can filter these

venues to get only indian resturants.

GeoSpace data

Data source : https://data.cityofnewyork.us/City-Government/Borough-Boundaries/tqmj-j8zm

Description : By using this geo space data we will get the New york Borough boundaries that will help

us visualize choropleth map.