

# **CAPSTONE PROJECT: BATTLE OF THE NEIGHBORHOODS**

## **Purpose**

This document provides the details of my final peer reviewed assignment for the IBM Data Science Professional Certificate program – Coursera Capstone.

## **Introduction**

As an Indian student, I wanted to visualize the extent of the spread of the Indian cuisines across the world. As we worked on the data sets which were related to the prime locations, like New York and Toronto, so I chose New York as the city of interest to find out the number of restaurants serving the Indian cuisines and based on the ratings of the visitors of these restaurants taken from the Foursquare API, in order to decide the best restaurant amongst all and also to find out the neighborhood in New York city with the highest count of the Indian restaurants.

Demographics of New York City (Source: Wikipedia)

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.

Having read about the diversity of New York, it will be great to find out what this city has in stock for us to find as an outcome to our problem statement.

We will try to answer these questions:

What is the best location in New York for finding Indian Cuisine?

Which place has the highest rated Indian Cuisine?

Where to find a variety of Indian Cuisines (highest count of Indian Restaurants)?

## Required Datasets

For this project the following data is used:

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

- Data source: [https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset)
- Description: This data set will be used to explore various neighborhoods of New York city.

Indian restaurants in each neighborhood of New York city.

- Data source: Foursquare API
- Description: By using this API we will get all the venues in each neighborhood. We can filter these venues to get only Indian restaurants.

## Working with the Data:

1. Gather the New York city data from [https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset) ([https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset))
2. Using the Foursquare API, we will find all venues for each neighborhood.
3. Filtering out venues that are 'Indian Restaurants'.
4. Collect rating, tips and like count for each Indian Restaurants using Foursquare API.
5. Using rating for each restaurant, we will sort that data.
6. Visualize the Ranking of neighborhoods.

Thank you.

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