IBM DATA SCIENCE CAPSTONE REPORT: VED NERLIKAR

**INTRODUCTION**

* New York City is the most populous city in USA and one of the most diverse. Approximately 36 percent of the City's population is foreign born. The culture of food in New York is one to envy. Being such a multi-cultural city, one can find mouth-watering delicacies of various cuisines from around the world.
* New York has a plethora of establishments which are fiercely competitive. The culinary diversity of New York City ranges from Mexican, Korean, American Burgers and Soul Food to Turkish Döners and Italian to Indian food.
* The project explores the best locations for opening an Indian Restaurant in New York City. This information can be used to make good business decisions to open a Restaurant in the New York City or for individuals to decide which Indian Restaurant to visit based on ratings.
* This project can be classified as a Location-based Recommendation Project.

**PROBLEM STATEMENT:**

* For individuals wanting to patronise a restaurant that serves Indian food, what is th best location in New York City to have Indian Food?
* For an investor wanting to get into the Restaurant Business for serving Indian cuisine, what is potentially the best location in NYC to open an Indian Restaurant?

**DATA:**

* The dataset used is the New York City Dataset which can be found here: <https://cocl.us/new_york_dataset>. The data comes in JSON files and is easily readable with Pandas.
* Neighborhood, Borough, Latitude and Longitude are the attributes found in the main dataset.
* The data pertaining to locations and ratings of the Indian Restaurants is gained from the FourSquare Developer API.
* There are no missing values in the dataset.
* For geo-spatial visualization of the data, I have used Folium. For GeoCoding, I use GeoPy.

**METHODOLOGY:**

* Load the dataframe from: <https://cocl.us/new_york_dataset>.
* Convert the JSON file to a Pandas dataframe.
* Use foursquare developer API to locate the venues and get their ratings.
* Analyse and conclude.

**RESULTS:**

* **Manhattan**has the least number of Neighbourhoods, but it has the highest number of Indian Restaurants.
* The Neighbourhood of **Richmond Hill** in **Queens** has the most amount of Indian Restaurants in a Borough.
* Indian Restaurants in **Manhattan** have the highest average rating as compared to the ratings of the other Borough average restaurant ratings.
* The best rated restaurant according to Likes and Tips is **The Kati Roll Company**neighbourhood of **Midtown**in borough of **Manhattan**.
* The best rated Indian Restaurant in New York City is **Tamarind Tribeca**in the neighbourhood of **Tribeca**in the Borough of **Manhattan**.
* **Bronx** and **Staten Island** have the least number of Indian Restaurants in New York city.
* The average rating for restaurants located in Bronx and Queens is the lowest in comparison to the other boroughs.

**CONCLUSION:**

* The best rated Indian Restaurant in New York City for an individual to visit is the **Tamarind Tribeca** in **Tribeca, Manhattan**.
* The borough of Bronx has the **least number** of Indian Restaurants out of all the boroughs of New York City. Bronx also has the **lowest average rating** for its Indian Restaurants. Thus, **Bronx** would be a good location for an investing and opening an Indian Restaurant in New York City to have the best shot at success.
* Similarly, based on the visualization of the location of the highly rated restaurants with Folium, the borough of **Queens**can also be a prospective location for opening a new Indian Restaurant.