IBM Data Science

Capstone Project

Opening a new rtestaurant

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Business Problem

My client, a young chap from Japan just moved to New York with a plan to open a restaurant. He is a sushi lover and makes delicious sushi (I can vouch, it is the best sushi I have ever had). He currently resides in the Manhattan area and plans to open a sushi restaurant in Manhattan, New York and approached us to help him decide the perfect location for his restaurant. His basic consideration is to open a restaurant in a neighborhood that has limited sushi places.

The main business requirement is to select a strategic place for the restaurant to maximize potential customers. To achieve this we would need to:

- Analyze the locations of existing restaurants
- Identify areas suitable for opening the new restaurant.

Data

We would require the following data:

- Neighborhoods of Manhattan, New York: We will download the file from https://cocl.us/new_york_dataset that contains coordinates for all Neighborhoods in New York. Here is the snapshot of the sample data:

	Borough	Neighborhood	Latitude	Longitude
0	Manhattan	Marble Hill	40.876551	-73.910660
1	Manhattan	Chinatown	40.715618	-73.994279
2	Manhattan	Washington Heights	40.851903	-73.936900
3	Manhattan	Inwood	40.867684	-73.921210
4	Manhattan	Hamilton Heights	40.823604	-73.949688

- Location of Existing Sushi Restaurants: The FourSquare API is particularly helpful in this regard – It has an extensive database that contains important data of all the

restaurants and bars. We would use it to get coordinates of sushi restaurants in Manhattan. In addition, we would use category id “4bf58dd8d48988d1d2941735” to get details of only sushi restaurants.

Methodology

In this project I would be clustering the neighborhoods based on sushi restaurants.