Capstone Project – week 1 Report

\<Market Research for Restaurant in New York City\>

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I.   Problem Definition

The project has New York City as a target. New York City is the largest and planned city in the United States in the southern part of New York. It is the busiest and most famous city in the world and is known as the capital of the world as a center of politics, economy, culture, fashion, etc. Also, it is one of the most famous urban tourist destinations in the United States and is loved by many tourists.

If someone wants to run a restaurant in New York City, how should he plan his management? Which of New York City's residents or tourists has the better proportion of potential restaurant customers?

I made my virtual client for this project. My client recently moved to New York City after getting married. He wants to run a new restaurant in the city to maintain his livelihood. He has just moved to the city and has spent most of his life in the eastern part of the United States, so he knows little about the tastes of people in the region.

He wants to find out the 'type' of restaurant that people there prefer and their taste buds. Especially, he wants to avoid being a same kind of restaurant with the other competing restaurants that are overwhelmingly well-received. He gave me his home address and asked me to do market research within a 5-kilometer radius.

I will be a data scientist who has received this hypothetical request. I am going to investigate the trends in New York restaurants based on two keywords, 'the type of food.'

II. Data Description

I will only use Foursquare location data for my project. I can get information about what kind of restaurant is around a specific location, as well as distance, category, address, ratings and reviews of each restaurant.

I have set up my client's residence as an apartment in downtown New York City. I will collect location information for all restaurants within a radius of 5 km around the location. After that, I will carry out three tasks with the data:

First, I will sort out the categories of each restaurant to see which kind of restaurants are the most distributed. Although sales at each restaurant are unknown, but I can give my customers information about which foods are common and which are rare. Based on the information, he will be able to determine what kind of food he will sell.

Second, I will select only restaurants with a rating of 9/10 or higher and make a list. The list includes the categories of each restaurant. I can give this information to customers to avoid competition with overwhelmingly well-rated restaurants.

Finally, regardless of the type of restaurant, I will pick out the 10 restaurants with the most customer reviews and make a list of only the reviews that include the 'taste'. It's because my client is not interested in service, location, or interior, and only requested me information about customers' tastes. He will be able to determine the liver, amount, and so on of his food by referring to the reviews of customers who have visited competitive restaurants.