Coursera Capstone

Opening an Ethnical Japaneese Restaurant in New York

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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 2018, 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 continues to be by far the leading metropolitan gateway for legal immigrants admitted into the United States.

This final project explores the best locations for Japanese restaurants throughout the city of New York. Potentially the owner of the new Japanese restaurant can have great success and consistent profit. However, as with any business,

opening a new restaurant requires serious considerations and is more complicated than it seems from the first glance. In particular, the location of the restaurants is one of the most important factors that will attempt to answer the questions: “Where should the investor open a Japanese Restaurant?” and “Where should I go if I want great Japanese food?”

Business Problem

The objective of this Capstone project is to analyze and select the best location in the city of New York to open a new Japanese restaurant. Using Data Science metholodology and instruments such as Data Analysis and Visualization, this project aims to provide solutions to answer the business question: Where in the city of New York, should the investor open a Japanese Restaurant?

Target Audience of this project and some demographic facts

This project is particularly useful to developers and investorslooking to open or invest in a Japanese restaurant in the city og New York. Overrall, New York is a great place to open a restaurant with an ethnicalcuisine. As New York is the most diverse city in the world (800 languages are spoken in NY). With its deverse culture, comes diversity in the food items. There are many restaurants in New York City, each belonging to different categories like Chinese, Indian, French, etc. Why did we decide to focus on Japanese cuisine in our project? Now when the idea of a healthy lifestyle conquered the minds of people all over the country, Japanese restaurants became extremely popular, as they offer a healthy alternative to regular American eating habits.

Data

To solve the problem, we will need the following data:

- New York City data containing the neighbourhoods and boroughs
- Latitude and longitude coordinates of those neighbourhoods. This is required to plot the map and get the venue data.
- Venue data, particulary data related to restaurants. We are going to use this data to perform further analysis og the neighbourhoods.

Data Sourse and methods to extract them

New York City data containing the neighbourhoods and boroughs willbe obtained from the open data sourse: https://cocl.us/new_york_dataset . After it, we will get the geographical coordinates of the neighbourhoods (latitude and longitude) using Python Geocoder package.

Finally, we will use Foursquare API to get the venue data for the neighbourhoods defined at the previous step. Foursqare has one of the largest databases of 105+ million places and over 125,000 developers use this application. Foursquare API provides many categories of the venue data; we are particularly intrested in the restaurant data to solve the business problem defined above.

This project will require using of many data science skills, from web scrapping (open sourse dataset), working with API (Foursquare), datacleaning, data wrangling, to map visualization (Folium). In the next methodology section, we will discuss and describe any expploratory data analysis that we did, any inferential statistical testing that we performed, and what machine learning techniques were used.