Coursera Capstone

IBM Applied Data Science Capstone

Opening A Bubble Tea Shop in Los Angeles

By: Ning Chu

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Introduction:

Los Angeles often known by its initials L.A., is the largest city in California. With nearly four million people, it is the second-most populous city in the United State. Los Angeles is known for its Mediterranean climate, ethnic diversity, Hollywood entertainment industry, and its sprawling metropolis.

Many Taiwanese immigrants settled in California, leading to a number of bubble tea shops opening around Los Angeles.Bubble tea, popularly known as boba tea, is a Taiwanese drink.It is prepared with tea or milk as the base component. This tea is glazed with boba, which are soft, chewy, and gummy tapioca pearls extracted from cassava root.Since the '90s, Los Angeles has a strong passion for milk tea studded with chewy pearls of boba. From Downtown to West Hollywood, Los Angeles has a large variety of boba houses offering both customizable teas and classic favoritesAccording to a new report published by Allied Market Research, the bubble tea market size was valued at $2.4 billion in 2019 and is estimated to reach $4.3 billion by 2027. Therefore, the analysis and results of this project would interest stakeholders who are interested in opening a bubble tea shop in Los Angeles.

Business Problem

The objective of this Capstone project is to analyze and select the best locations in the Los Angeles to open a new Bubble Tea shop. Using Data Science methodology and instruments such as Data Analysis and Visualization, this project aims to provide solutions to answer the business question: Where in LA, should the investor open a Bubble Tea shop?

Data

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

- Los Angeles data containing the neighborhoods and boroughs.
- Venue data, particularly data related to restaurants. This data will be used to perform further analysis of the neighborhoods
- Latitude and longitude coordinates of those neighborhoods.This is required to plot the map and get the venue data.
- Average neighborhood rent

Data Source

- List of all neighborhoods in LA — https://en.wikipedia.org/wiki/ List_of_districts_and_neighborhoods_of_Los_Angeles
- Coordinates of all neighborhoods and venues — GeoPy Nominatim geocoding
- Number of restaurants and their type and location in every neighborhood — Foursquare API
- LA rent data — https://www.rentcafe.com/average-rent-market-trends/us/ca/ los-angeles/