Opening up a Japanese Restaurant in the City of Central Los Angeles

Data

2.1 Data Required to Resolve the Problem.

There are approximately 17 neighborhoods in central los angels with 4 million residents residing with diverse ethnic background. To find a solution for the problem, we require data sets of the following nature.

1. Data of Distribution of Schools and Universities to locate the Younger Crowds.
2. Data of distribution of Japanese Restaurants in Central LA to locate competitors.
3. Data of Most Popular Places People Visit by Neighborhood to get an idea of the nature of the neighborhood.
4. The Renting Cost for Business based on Neighborhoods in central LA.

All the above data gathered from several palaces. The list of neighborhoods in LA is retrieved from Wikipedia Page using BeautifulSoup to extract it. The Renting cost is also retrieved from a rentcafe website using beautifulsoup. The locations and distributions of Schools, Universities and Other licensed Japanese Restaurants through the use of Foursquare service. The location/coordinates of each place is obtained through OpenStreetMap.

List of LA neighborhoods:
https://en.wikipedia.org/wiki/List_of_districts_and_neighborhoods_of_Los_Angeles

Location of Places (Retrieving coordinates):
http://nominatim.openstreetmap.org/search.php?

Rent Prices for All Neighborhoods
https://www.rentcafe.com/average-rent-market-trends/us/ca/los-angeles/

2.2 How Data Will be used to resolve the problem

- Use OpenStreetMap to retrieve coordinates of the 17 neighborhoods and store these coordinates in a table. Later on the coordinates will be passed from this table onto the folium api to draw a map of all the locations of the neighborhoods.
- Use Foursquare service and geopy data to map top 10 venues for all Central LA neighborhoods and clustered in groups that are related to each other. The explorer api call of foursquare will be used to get all the nearby top 80 places. And then run k-means algorithm to analyze 10 most common venues in each cluster.
- Use foursquare service and geopy data to map schools, universities, office spaces that are essential for analysis of the customer base for the restaurant. The search api call of foursquare will be used get the locations. All of the places will be visualized using folium api on the map to get a better understanding of customer distribution.

- Developing a score system that takes into account the number of schools, universities, hotels and restaurants that are there in each neighborhood and giving a weightage to each of those parameter (positive/negative) so as to calculate a final score of suitability of the Japanese restaurant on each neighborhood.
- Retrieving rent cost from rentcafe.com and storing on a pandas dataframe table. Later the rent values will be compared with final score system already developed to get a better understanding of Central LA neighborhoods and also to uncover any relationship- with close location to those places and the rent cost.
- Maps will be developed to analyses the distribution of places such as schools, offices and restaurants for each neighborhood. The folium api will be used.
- Bar graphs will be used to analyze the distribution of hotels, restaurants among each 17 neighborhoods.