Elliott Rose

1-24-20

Oakland Zip code analysis for Site Location and Marketing of Wellness Spa

**Introduction**

For this report, I will be utilizing data to research the business environment in Oakland, California for a friend who is starting a wellness spa. To assist her in starting this business, I will use Foursquare venue and location data to examine the Zip codes in Oakland to find business environments that would be fitting for her first location. Further, I will use demographic data scraped from the web detailing the makeup of the zip codes and neighborhoods in Oakland. With this data, we’ll be able to examine the demographic makeup for marketing to her target audience. This paper will detail the process of wrangling, cleaning, visualizing, and analyzing this data.

**Background**

The wellness spa will provide services like yoga and meditation classes, as well as homeopathic products. The target audience is primarily people between working age adults, majority female, with household incomes greater than $60,000. I will assume that areas with makeups similar to this demographic would be optimal for location placement and marketing. Further, I believe it would be beneficial for location placement to find areas that contain venues that have a similar recreational and health-conscious tilt to provide a synergistic environment for our location. These commonalities could provide for walk or drive-by customer opportunities that may not be as present in areas with disassociated business profiles.

**Data**

I will be sourcing data from two sources: the Foursquare API for location and venue data, and zip-codes.com for demographic data. Zip-codes.com does not have an API, but stores the data in html tables, which I will use to scape the data using Beautifulsoup with Python. Each zip code is stored on a different page so I will have to use a loop to scrape zip code page to collect the data. From zip-codes.com, I will collect population, gender profile, average income, housing value, persons-per-household, and households per zip code.

The Foursquare API returns venue and location data that will be relevant to our search. We want to understand the types of venues that are in each zip code to get a picture of the business environment. For example, we would want to avoid and area that is mostly industrial warehouses, or fast-food type restaurants. The location data that is provided by the Foursquare app is particularly useful as it returns the mapping coordinates of each location, which will allow us to plot the venues on the map to visualize each zip code.