Introduction / Business Problem: Restaurant Placement in Los Angeles

The Problem: Restaurants appear in Los Angeles like shooting stars, appearing suddenly in a blaze, the fading off into the horizon. Many of the restaurants that go out of business in the area are well designed, have an interesting menu, and great staff, but suffer from placement. If a new restaurant is seen in a neighborhood that is too similar to others nearby, the locals are naturally not going to abandon their favorite eateries in lieu of something new, and potentially inferior. This project is designed to assist a prospective restaurant developer in exploring the city using data. This can give us far more information, much more quickly, than exploring a neighborhood on foot.

Foursquare: This project will make extensive use of the Foursquare API to harvest data from the Foursquare database. The venue information in Foursquare is reliable and generally not contained in other databases (county, state, and municipal registration databases are often incorrect about simple classification items like business type and category, I have checked). The crowdsourced nature of the database ensures its general reliability and current data status. For our purposes the "category" information will be our primary metric and standard for restaurant placement.

Analysis of Foursquare data can give us the layout of establishments on a map, telling us which areas would benefit from a new restaurant, potentially of a certain type. Some areas, in the course of this investigation, were found to have a number of commercial establishments nearby, but not enough eateries. This type of situation is ripe for a commercial venture and promises to be more profitable and stable than choosing a location based on happenstance availability.

The audience we are trying to reach with this study is any venture capital firm that would be willing to fund the expansion of the restaurant sector. The idea does not have to have a theme, such as a jungle-themed restaurant, it merely has to be profitable. We are looking to fill a vacuum, not entice people from across the city to sample the restaurant's fare.

Method – K-Means: The data will show us where to place a new restaurant that can meet a need in the neighborhood. If this is replicated ten times over, it will provide the owners and business funding agents a steady, stable source of additional revenue. We will cluster the restaurant types across neighborhoods using the k-means clustering algorithm.