# **The Battle of Neighborhoods**

## **Opening Chinese Restaurants in Davis, CA**

### **Introduction/Business Problem**

#### **Background Information**

Davis is the most populous city in Yolo County and is known as a farming community, a haven for bicycles, and home to UC Davis. Davis is located at the following coordinates: 38.5449° N, 121.7405° W, a little over 10 miles West of Sacramento, the capital of California. With a population of over 65,000 people with UC Davis students making up over half of that population, Davis is split into 6 neighborhoods and are as below:

* Central Davis
* Downtown Davis
* East Davis
* North Davis
* South Davis
* West Davis

#### **Problem**

In this project, because Davis is such an ethnically diverse city, I want to investigate if there are any locations that should open Chinese restaurants and whether or not there is a need for it.

#### **Interest**

Anyone who wants to open a new venue in any geographic location may be interested in this project by modifying search criteria.

### **Data**

#### **Data Sources**

To consider the problem we can list the following data sources, noted below:

* I get neighborhood data of Davis from Wikipedia
* I use python geocoder library to get geographical coordinates of neighborhoods
* I use the Foursquare API venues explore method to get the venues of given neighborhoods of Davis
* I use the Foursquare API venues method to get ranks and likes of restaurants by given venue id

#### **Feature Selection and Data Usage**

I will use neighborhood location values to analyze the Davis geographical structure. I will use the folium library of python to draw maps by using given latitude and longitudes of neighborhoods. Selected features will be as below.

I will use populations of neighborhoods who have big populations who may need a new restaurant.

I will also classify neighborhoods by using venues distribution and counts. In this way, I will find similarities of counties which will help me choose locations for opening a new restaurant. Similar structured counties may handle same the type of venues.

I will use the venue list category to find the distribution of restaurants and Chinese restaurants in neighborhoods.

I will also use ratings and likes of restaurants in the area. It may help me to find locations with bad rating restaurants which may need a new restaurant.