

## Capstone Project —Battle of Neighborhoods

### Description of the Problem (recap)

With the city's diverse outdoor attractions including wineries, golf, and outdoor dining, what would be the best location to place the new hotel?

Some considerations include proximity to the downtown restaurant and nightlife scene as well as easy access to the famous wine region and outdoor venues

### Description of the data

For this project we need the following data:

- Livermore Winery data that consists of
  - Names and Venue Descriptions
  - (latitude and longitude)
  - Data source : Google Maps Location Data and internet-based winery information
- FourSquare data that consists of
  - Names and Venue Descriptions
  - tips, and ratings
  - venue categories
  - Data source : Fousquare API

The Livermore winery data is taken from a previously developed map of the Livermore Valley Wineries and their locations, which can be found here: <https://www.google.com/maps/d/u/0/viewer?mid=1-QbY53IF7K4i0LrxQGKhO4C3XZE&ll=37.693532238241964%2C-121.74384539768353&z=12>

I will be using this data to discover what wineries are in relative proximity to each other and whether k-means clustering might uncover some insightful groupings, which could suggest a better strategic location for a hotel.

In addition, depending on the venue ratings and *categories in available in Foursquare*, I will be looking at the venue categories as well as other hotel locations to plot existing hotels and their coverages. I hope to eliminate areas that are already covered by existing hotels.

The Foursquare data will be used to find nearby venues that are of importance to tourists, which includes hotels, restaurants, shopping, and coffee shops. Additionally, winery information can be pulled to help cluster the wineries.