



PLACING A TACO STAND

Using Foursquare API
and K-means clustering algorithm



INTRODUCTION

- Are you going to open a restaurant, but you do not know where to place it?
- Locating a restaurant has never been an easy task.
- Now days we have Foursquare!! This API lets us gather venue data for any specific regions, using this API you have data in minutes about nearby restaurants, gyms, all types of restaurants, bars, etc.
- In this project I will get the best location to place a taco stand in South California



DATA AND REFERENCES

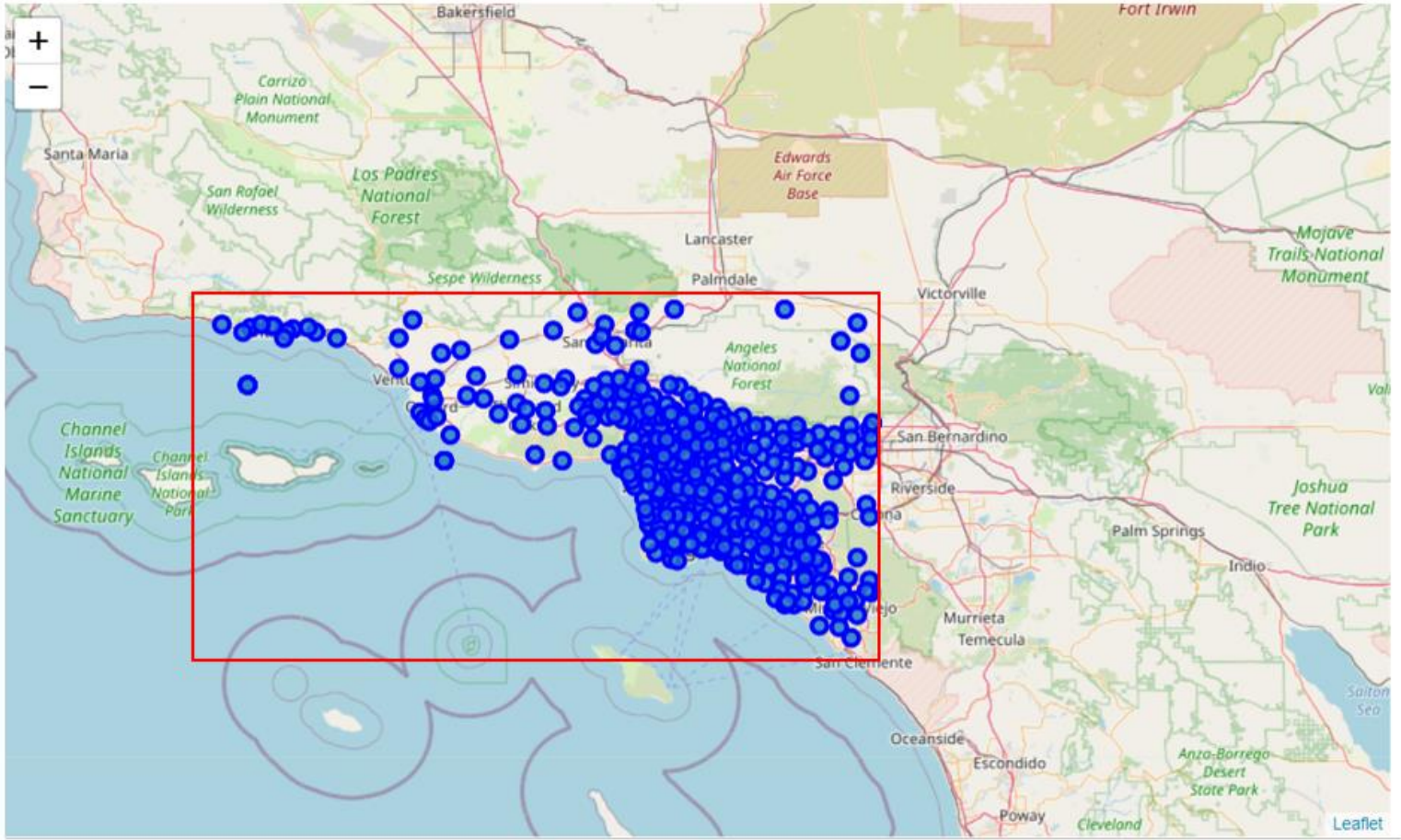
- Using google maps [1] we selected longitude and latitude was around Los Angeles, CA.
- In order to retrieve information from every city and postal code we used the web page Open data soft [2] and we got all the postal codes for the entire California.
- Also, we analyzed some information about the income of the people living in the surrounding areas. [3]
- Finally, for the heuristics of how to select a good locations we used this guide made by restaurant engine [4]



METHODOLOGY

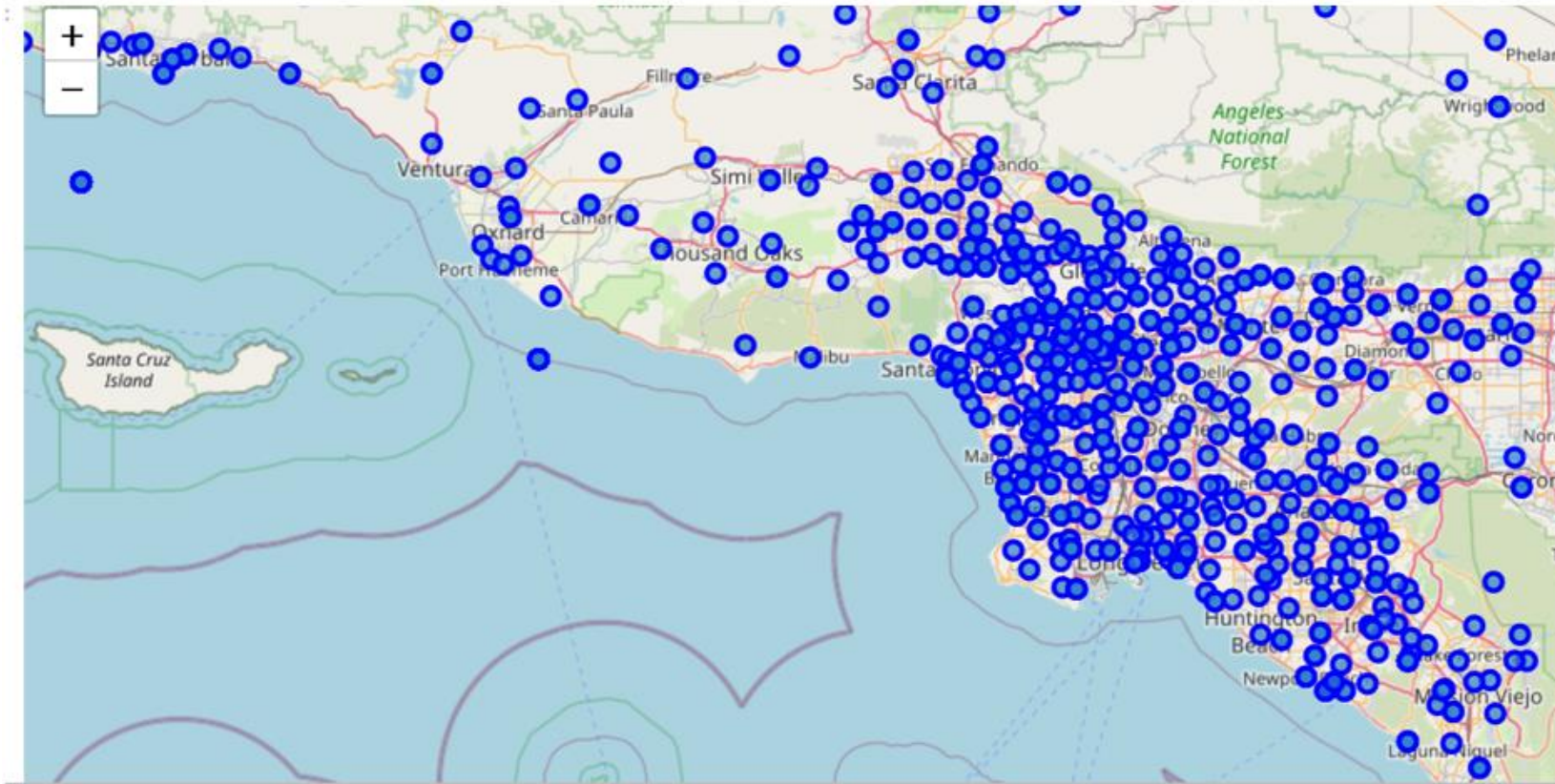
- Define a selected area to analyze
- Explore the nearby venues with the Foursquare API
- Define our targeted audience
- Filter our data regarding the audience
- Cluster the information using K-means algorithm
- Match the result with the IRS household income data
- Select the resulting top 3 location candidates

AREA USED



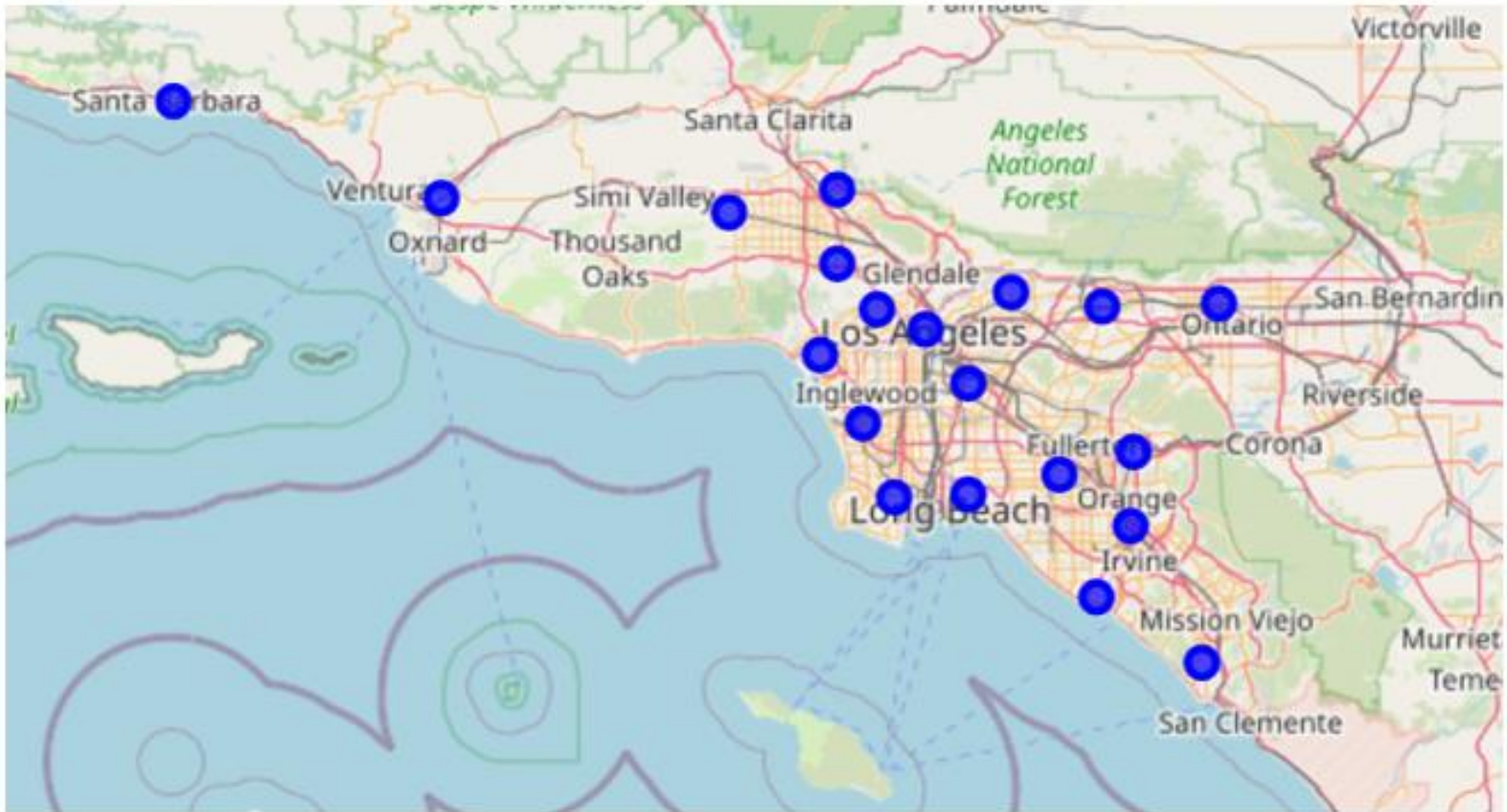
(Image 1): All zip codes used.

BARS, NIGHTCLUBS, MEXICAN RESTAURANTS AND TACO STANDS



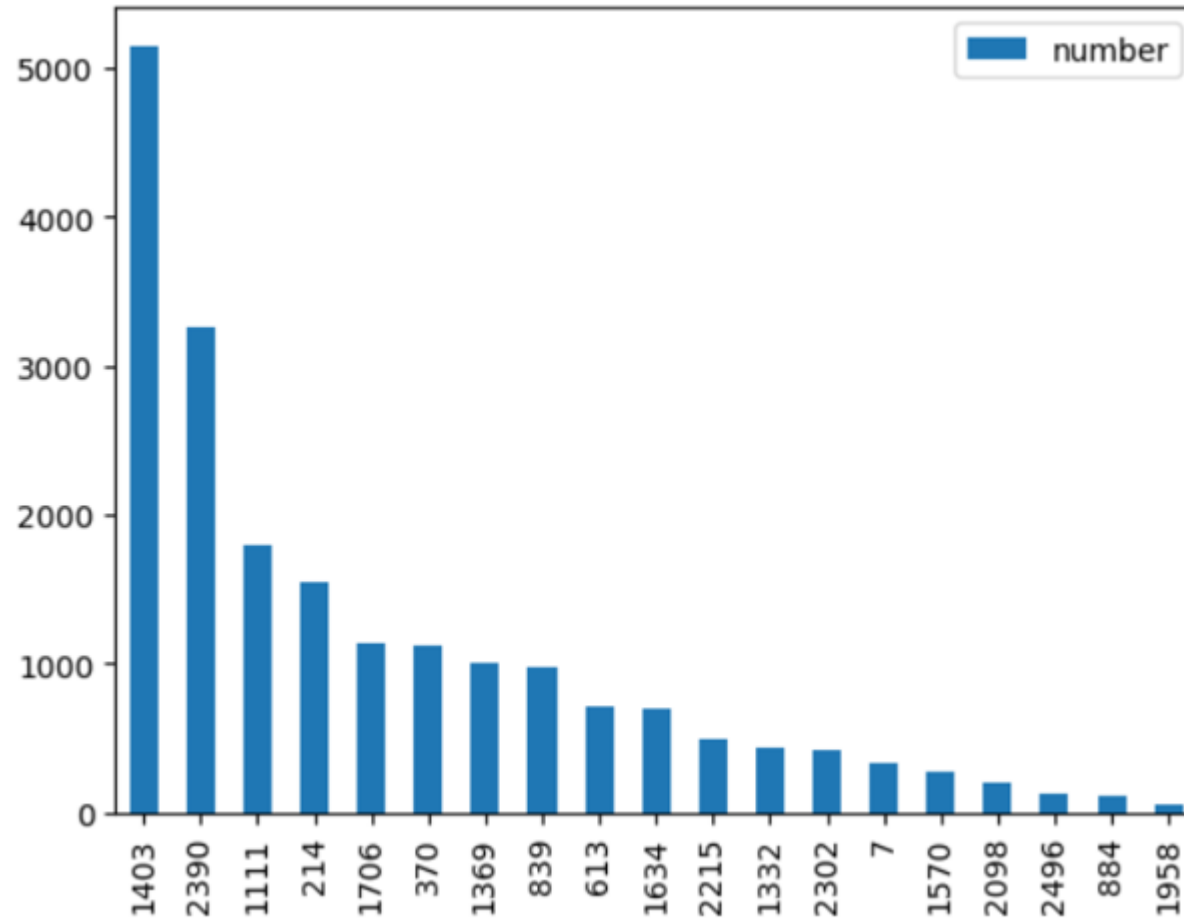
(Image 2): Filtered venues: **Bars, Nightclubs, Mexican Restaurants, and Taco stands.**

CLUSTERED VENUES

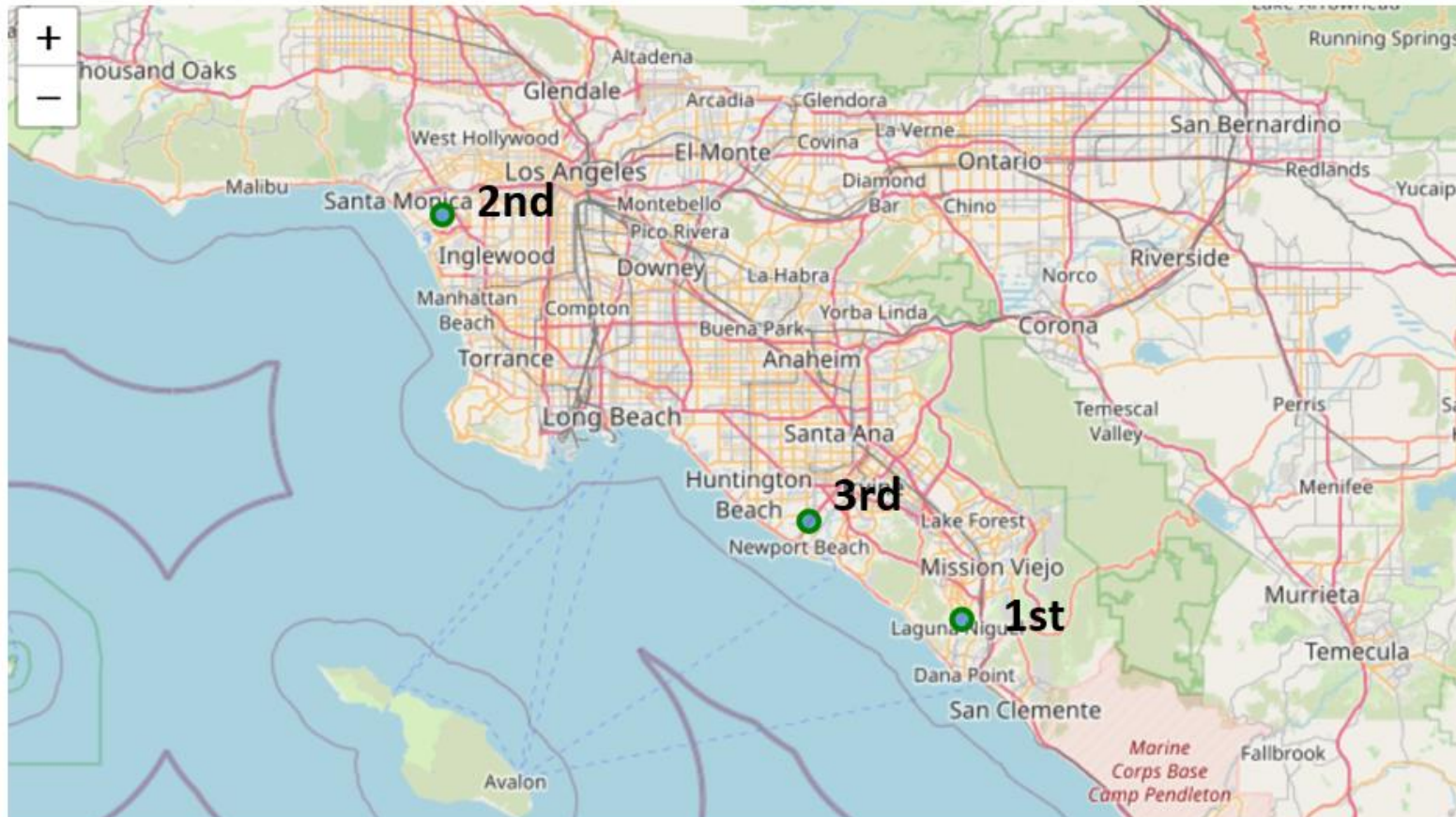


(Image 3): Important venues clustered.

NUMBER OF HOUSEHOLDS EARNING \$100,000 NEAR EACH LOCATION



RESULTS



(Image 5): Resulting top 3 locations to place the taco stand.

CONCLUSIONS AND OBSERVATIONS

- Foursquare API is awesome
- Is 20 the optimal number to cluster all the venues ? *Elbow method could solve this doubt
- Increasing the search radius from the Foursquare API might change the results a certain percentage.
- Better targeting of our audience could change the results
- If the taco stand is positioned at the spotted areas, the client just needs to focus on delivering high quality tacos. That will make a good reputation around the area and will continue to have business in the future years to come.

REFERENCES

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"Open data soft," [Online]. Available: <https://public.opendatasoft.com/explore/dataset/us-zip-code-latitude-and-longitude/export/?refine.state=CA>.

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