

Choose location for Vet Clinic in the Bay Area

IBM DATA SCIENCE CAPSTONE

SHAHBAZ MASOOD

FEB 2019



Introduction

- The location of any consumer-oriented retail business is a key factor in its success. Same is true for a pet clinic.
- An ideal location should consist of many factors like pet friendliness of area, number of dog parks, number of pet food and service shops etc.
- The following analysis helps solve veterinarians to pick a spot where the clinic would have the most customers while considering the above mentioned factors.

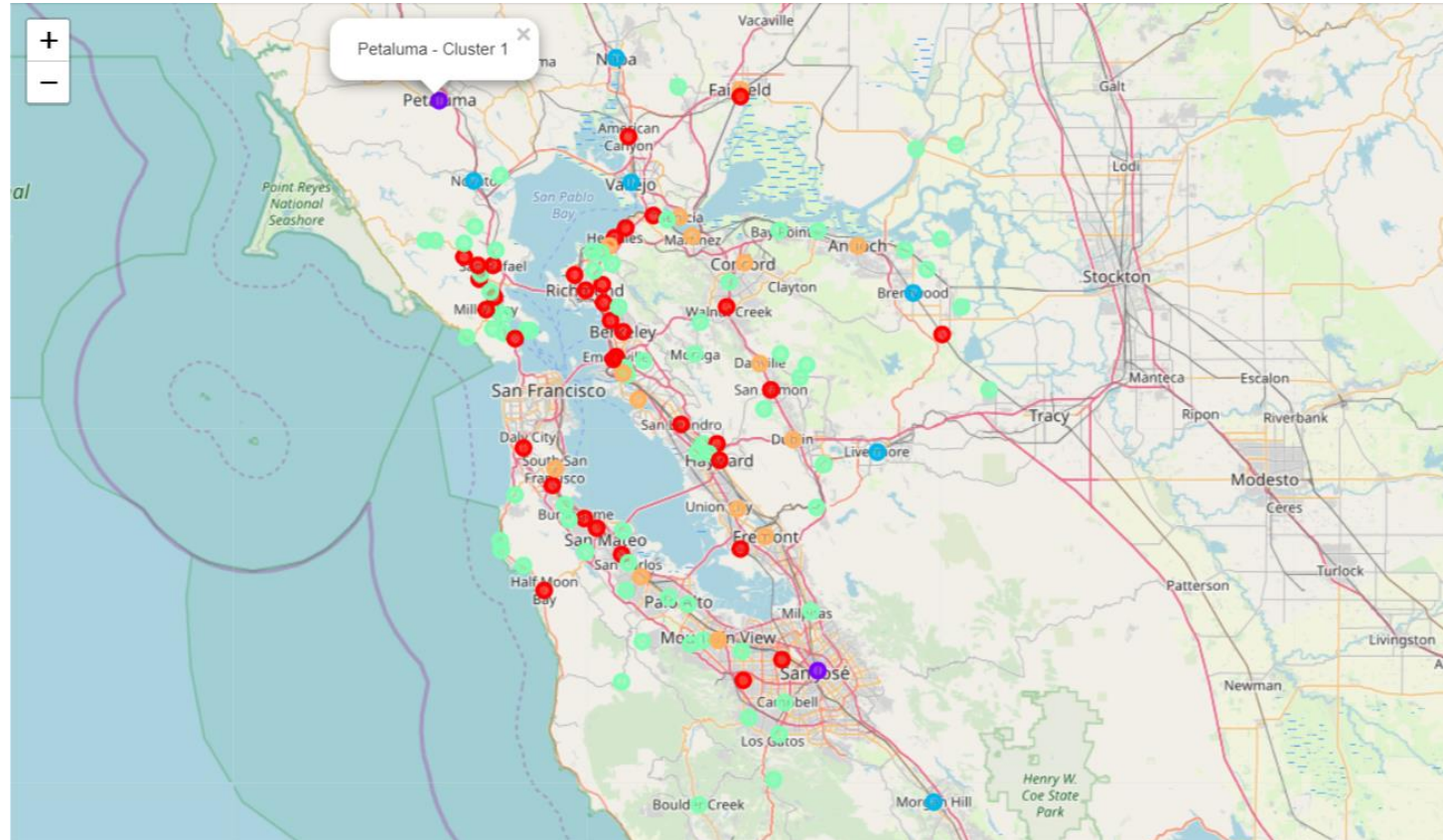
Data

- The analysis uses the data set **Bay_Area_cities.json** which was downloaded from the [github](#) repository of *FrankBowers43*.
- This json is used to get the names of all the neighborhoods in the bay area.
- The names are located in the features.properties.NAME10 node

Methodology

- Extract the names of the Bay Area Neighborhoods JSON
- Feed names to the geocoder API to get the latitude and longitudes
- Feed the location coordinates to the FourSquare Search query and process the result to store the in a workable data frame
- Cleaned data
- OneHot Encode the venue type.
- Deciding metric = MAX (Sum of counts of Dog Run, Pet Café, Pet Service and Pet Stores in each neighborhood and subtract the result from the count of Veterinarians in the neighborhood)
- Kmeans on the metric
- Analyze the data

Results – San Jose & Petaluma is the best choice



Conclusion

- The analysis provides a starting point for doing a physical survey of a good choice of starting and establishing vet clinic.
- The population of the two districts should also be considered in making the decision along with commercial rents etc.

THANK YOU!