Santa Cruz Housing

By Ayush Arora, Albert Garcia, Kyle Oda, Prajna Ta

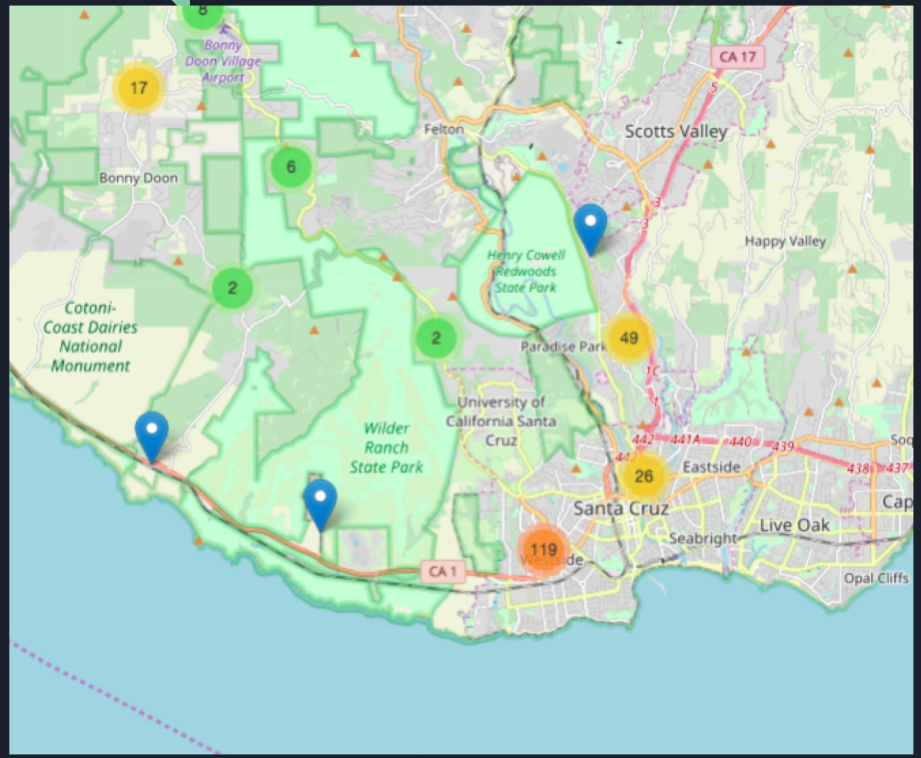
Questions and Data

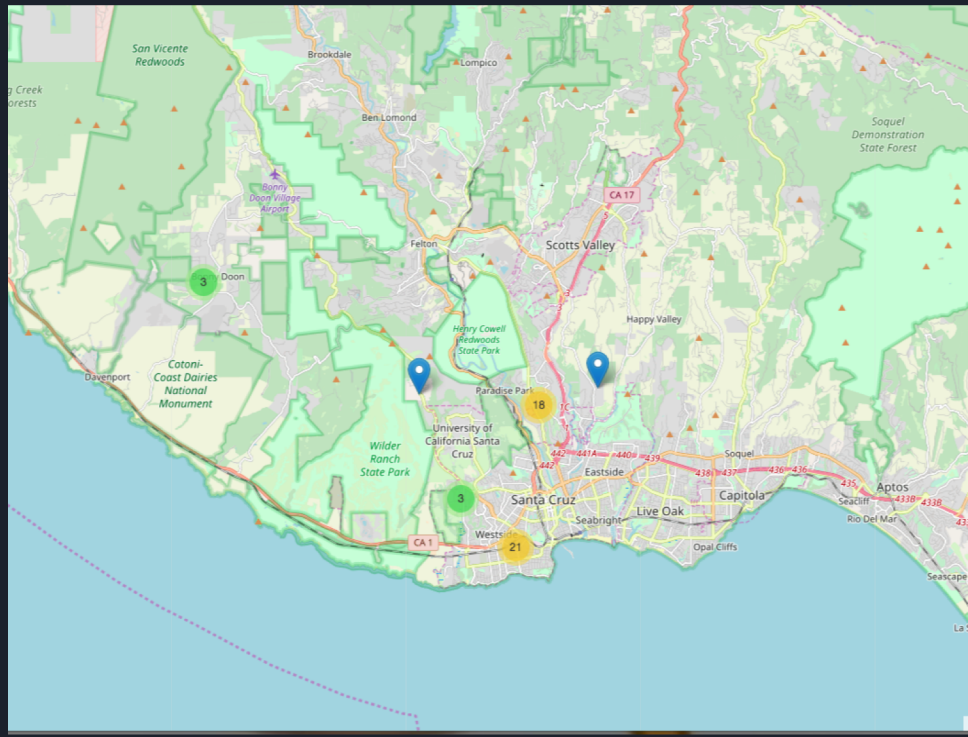
- Questions Explored
  - Is there a relationship between the location & features of a house with its price?
- Data
  - 2 regions of housing data
    - Zip Code, City, Street
    - Latitude & Longitude values
    - Beds, Baths, Sqft, Price per Sqft, Year Built, Price Estimate

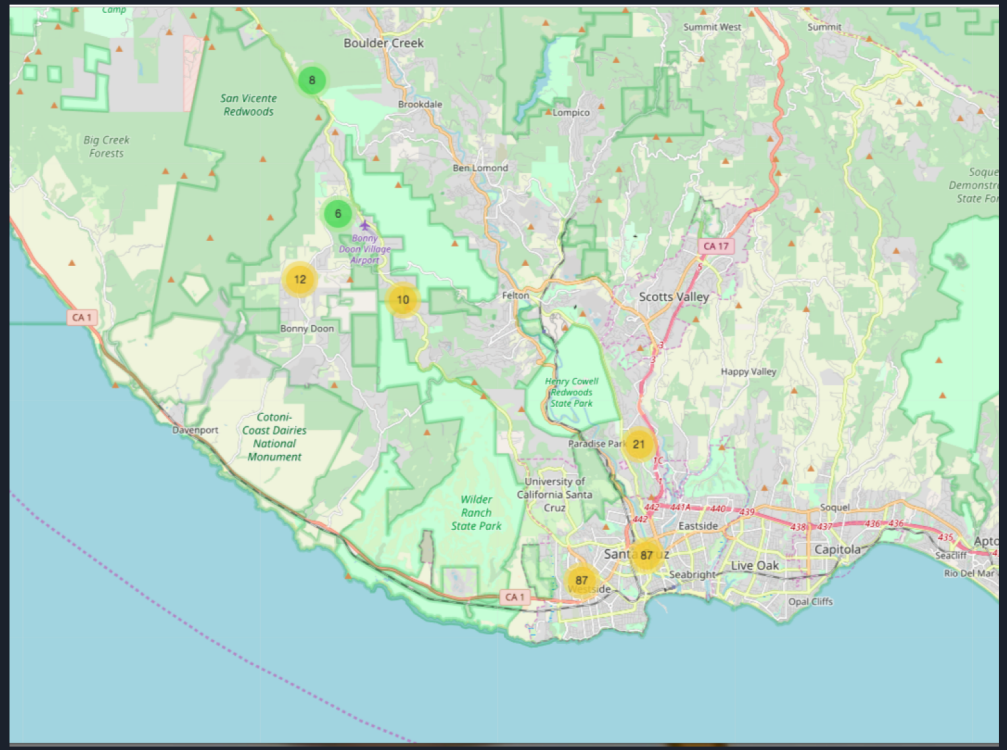
Results

- Ran k-means cluster analysis with 6, 8, and 10 clustered neighborhoods, determined that 6 was the optimal cluster number
- Cluster Analysis created 6 different maps, each map contains houses from an individual cluster
- Due to rendering constraints, we were unable to draw concrete conclusions, but we speculate that the first cluster concentrates on downtown apartments because of similar square footage, beds/baths, and year built
- In the future, we'd like to use a different data viz package that'll be able to overlap all the clusters onto one map

Final Results Obtained



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Summit West
Summit
San Vicente Redwoods
Brookdale
Lompico
Big Creek Forests
Ben Lomond
Bonny Doon Village Airport
Felton
Scotts Valley
CA 17
CA 1
Bonny Doon
Happy Valley
Henry Cowell Redwoods State Park
Davenport
Cotoni-Coast Dairies National Monument
Paradise Park
University of California Santa Cruz
Wilder Ranch State Park
Soquel
Eastside
Capitola
Live Oak
Seabright
Opal Cliffs
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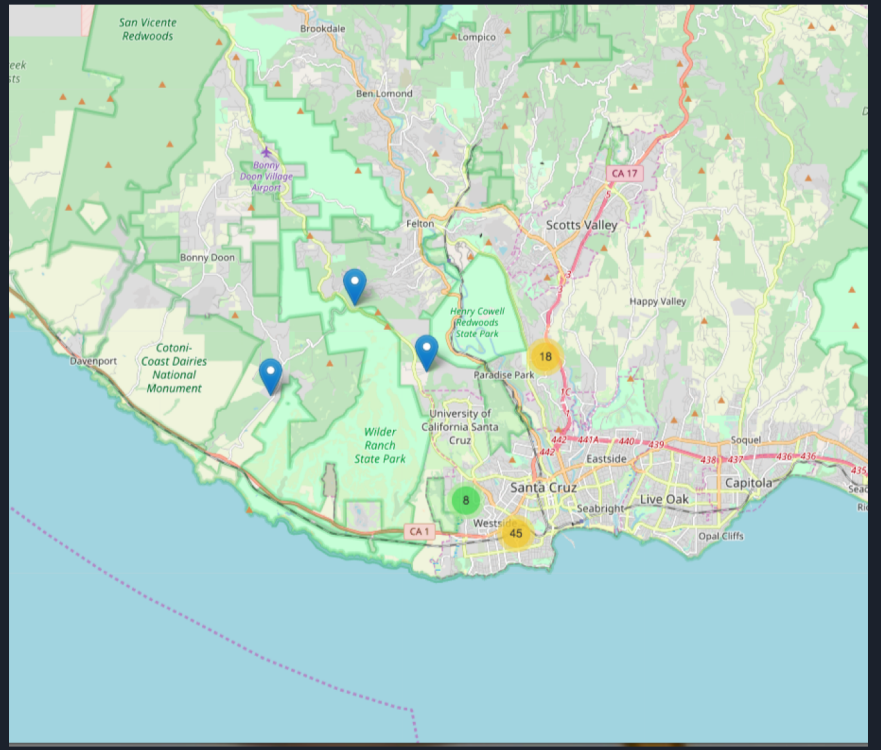
21
87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Paradise Park
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University of California Santa Cruz
Wilder Ranch State Park
Soquel
Eastside
Santa Cruz
Capitola
Live Oak
Seabright
Opal Cliffs
CA 1
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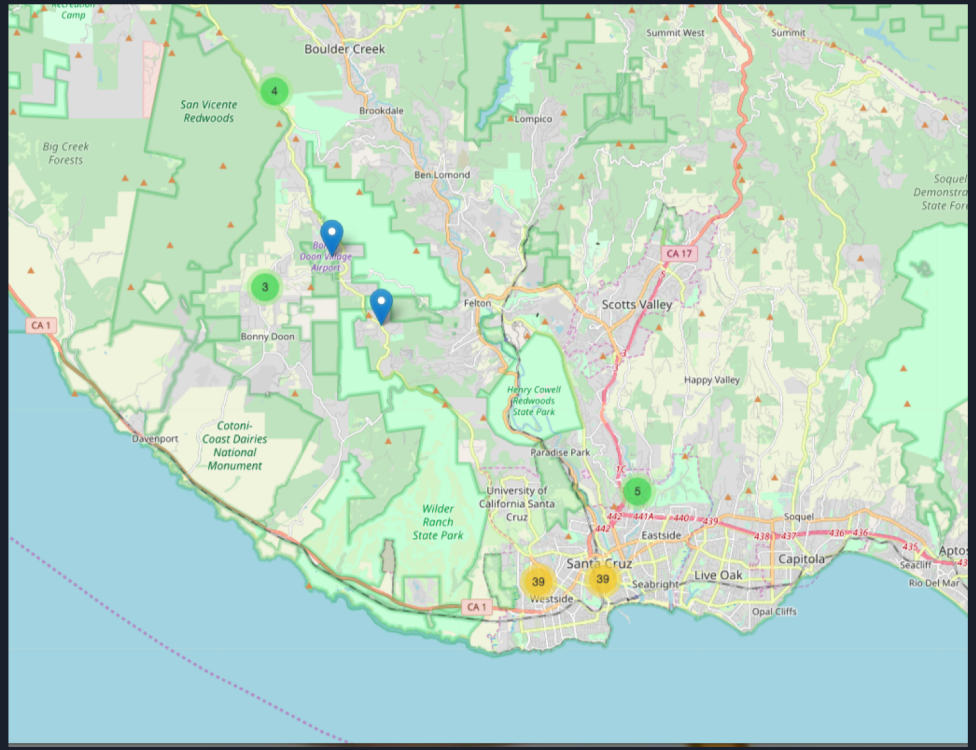
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Seacliff
Rio Del Mar
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Westside
CA 17
CA 1
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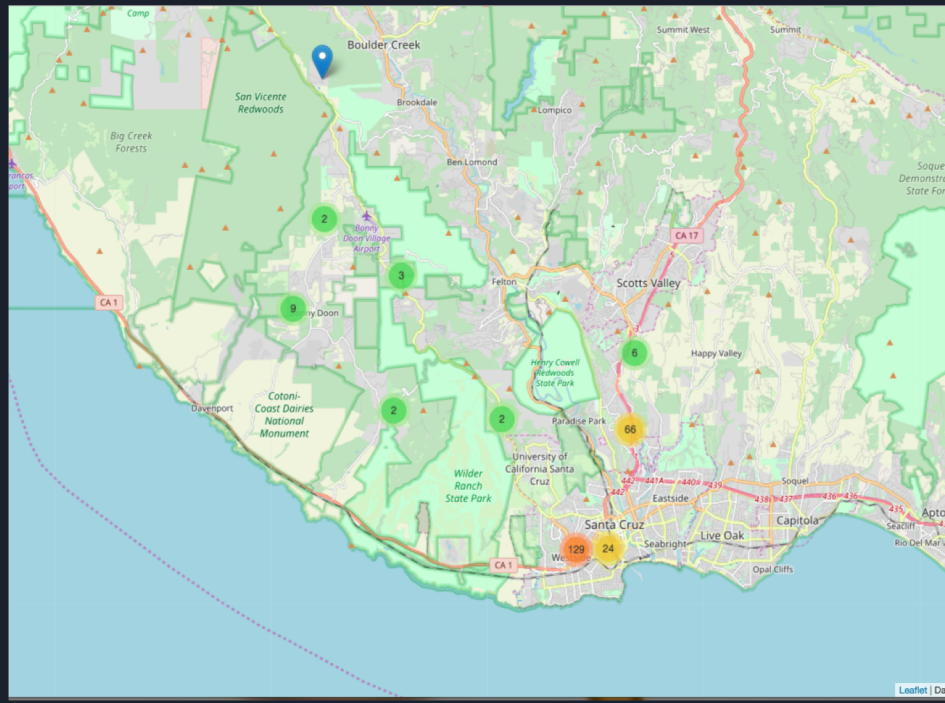
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2
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2
66
129
24
Leaflet

Libraries

- Pandas
- RegEx
- Numpy
- SKLearn
- BS4
- Folium
- Requests
- Matplotlib

Group member tasks

- Ayush
  - Assisted in pre-processing the data (parsing & cleaning) & labeled each house with a clustering number.
- Albert
  - Web Scraping and geocoded data.
- Prajna
  - Did data visualization and applied Folium to visualize the cluster maps and made changes to the csv files.
- Kyle
  - Helped create a parser to wrangle the data obtained from web scraping. Created data visualizations to better understand the dataset.