"Project Bull Builder"

Discovering Real Estate Trends in California

Project Members:

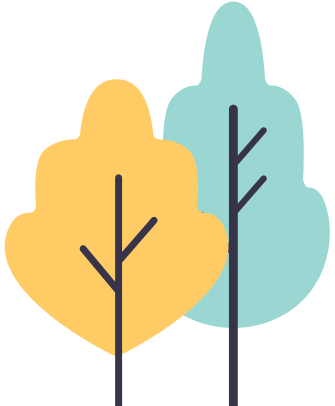Laura Jiménez

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The purpose of this project is to analyze trends in the California rental and residential real estate market. The analysis will help to determine California real estate investment strategies.

"Why is this important ?

CA REAL ESTATE MARKET

IS ON FIRE

*Disaster Girl NFT https://www.yahoo.com/news/disaster-girl-just-made-close-065649389.html

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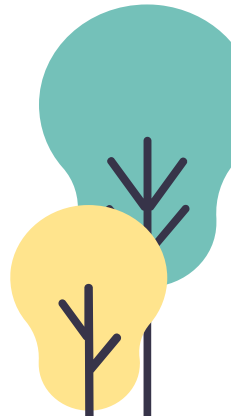
"Is it a good time to buy real estate in California?"

How has property value grown over time by zip code?

We collected data from Zillow for properties of 1, 2 and 3 bedrooms. Each dataset had an average property value per month going back to 1996.

What are the rental prices?

We gathered data for rental and residential prices for every zip code and county in California for 2021 through Zillow.
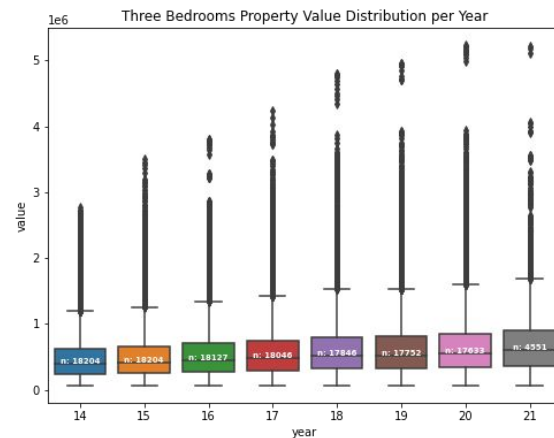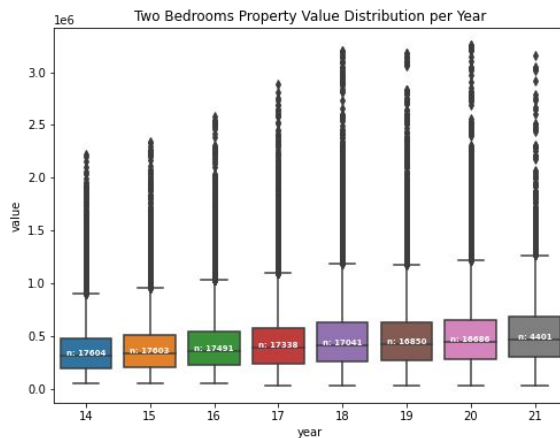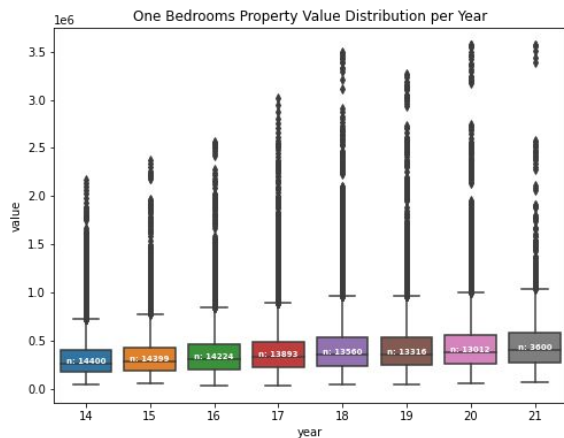
What other factors impact where I want to live?

We found data sets for crime (State of California) and a "Walk Score" API for major zip-codes.

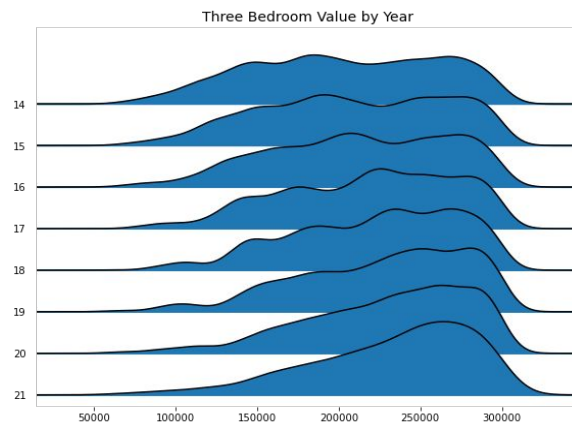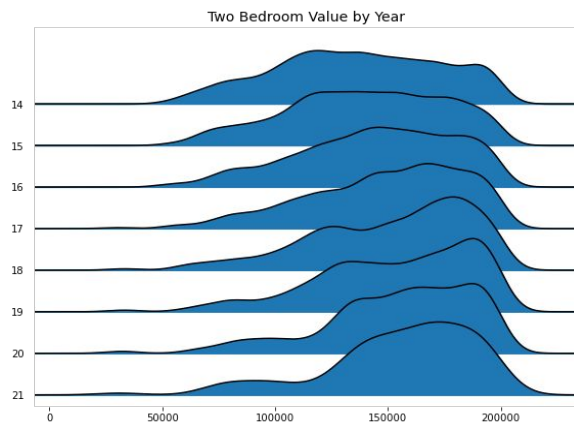# Property Value Distribution per Year

Home Prices in million (m)

Data Source: Zillow

Data Analysis - Understanding the Residential Market for Property Value

Property Value Distribution per Year

One Bedroom Value by Year

Two Bedroom Value by Year

Three Bedroom Value by Year

Data Source: Zillow

Property Value Increase since 2014

Property Value Change per Bedroom
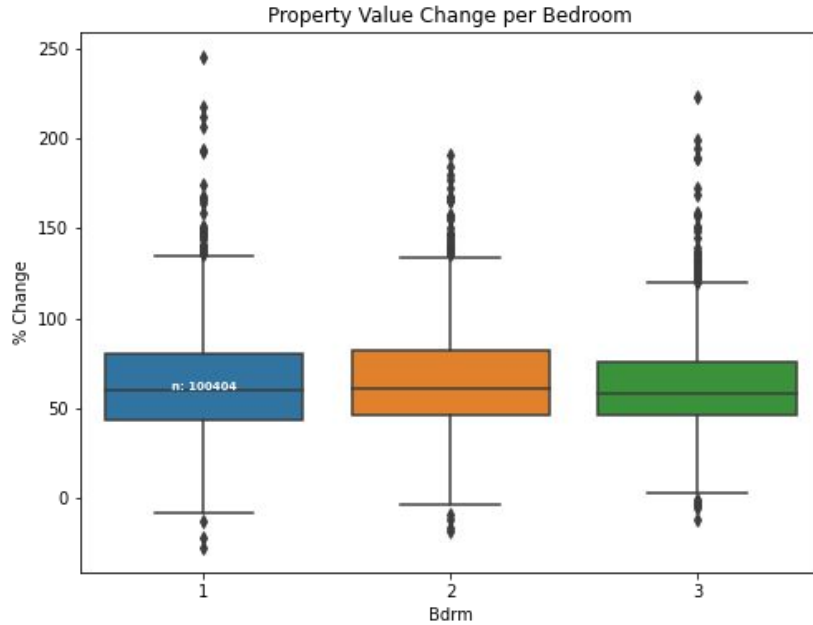
- Growth in 3 bedroom residential houses have less variability in the middle 50%

- While prices vary significantly per zip code, % growth has been mainly positive across all types of residential properties.

- Too many outliers in the data caused uncertainty within data integrity: e.g. 3M 1Bdrm property in San Francisco with 9 rooms.

Data Source: Zillow

Top Rental ROI by Zip Code - 2021

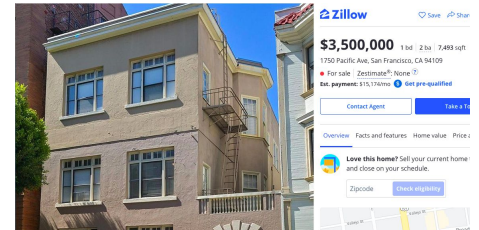| Zip_Code	zip_name	median_listing_price	Median_ROI
90740	seal beach, ca	314945.000000	9.730000
92543	hemet, ca	244000.000000	7.900000
92637	laguna woods, ca	323500.000000	7.480000
92203	indio, ca	476000.000000	7.320000
92701	santa ana, ca	334950.000000	7.210000
93312	bakersfield, ca	362500.000000	6.430000
93536	lancaster, ca	472495.000000	6.430000
92253	la quinta, ca	739500.000000	6.400000
92057	oceanside, ca	494994.500000	6.260000
92571	perris, ca	412450.000000	6.130000

|	Mean_ROI	Median_ROI
State		
CA	3.51	3.45

Heat Map of high Rental ROI

Top Walks Scores by Zip Code - 2021

| ZipCode	County	walk score	bike score
94109	San Francisco County	100	83.0
94111	San Francisco County	100	86.0
94104	San Francisco County	100	87.0
94108	San Francisco County	100	69.0
94110	San Francisco County	99	92.0
94118	San Francisco County	99	87.0
94952	Sonoma County	98	62.0
94133	San Francisco County	98	65.0
90020	Los Angeles County	98	66.0
94115	San Francisco County	98	87.0

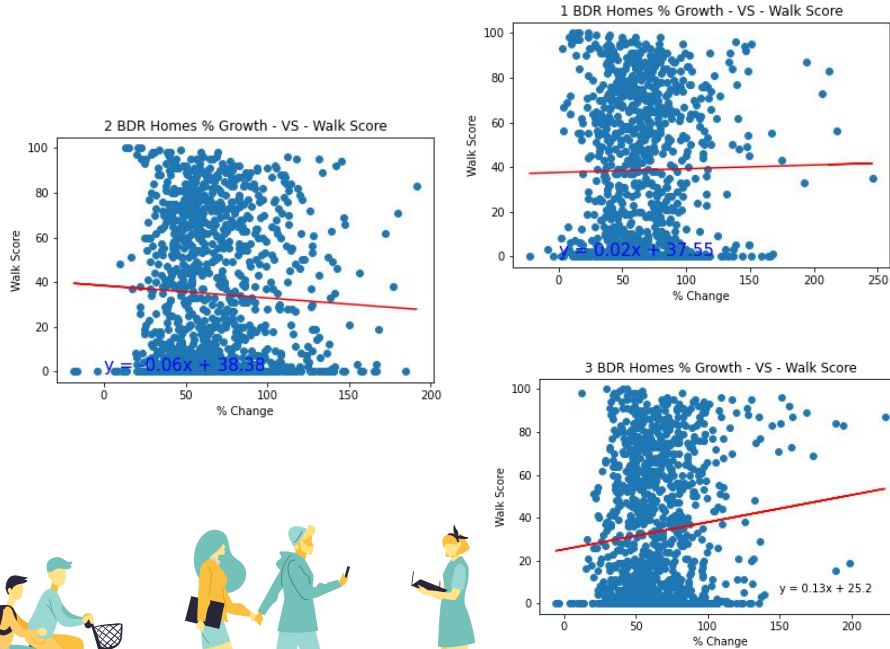Heat Map of high walk scores
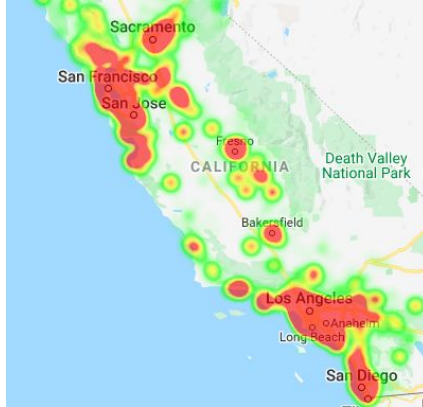
Top Crime Areas by County - 2019

CountyName	Violent	Homicide	Rape	Robbery	AggAssault	Property	Burglary	VehicleTheft	Total
San Francisco County	1,015	7	55	529	425	8,335	781	714	6,840
Alameda County	464	5	33	234	191	3,178	310	489	2,378
San Joaquin County	595	5	30	156	404	2,141	377	308	1,456
Los Angeles County	548	5	40	181	322	2,177	369	363	1,444
Sacramento County	398	5	24	120	250	2,131	389	317	1,424
Santa Clara County	277	2	40	80	155	2,070	297	351	1,422
San Diego County	423	3	41	107	271	2,046	285	359	1,402
Riverside County	215	3	14	61	136	1,657	294	293	1,070
Orange County	162	1	21	53	87	1,409	203	160	1,047
Kern County	348	5	28	77	237	1,850	475	368	1,008

Heat Map of high crime areas and counties
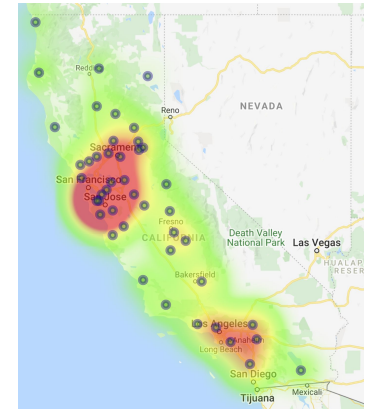
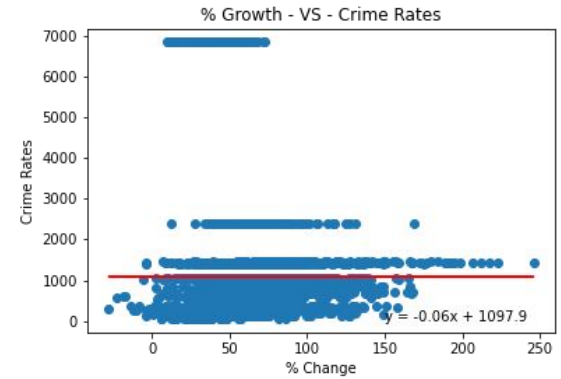**Data Analysis - Walk Ability Score & Crime Stats**

No Correlation between walk score or bike score and growth

Correlation between crime rates and property growth?

1 BDR Homes % Growth - VS - Walk Score

y = 0.02x + 37.55

2 BDR Homes % Growth - VS - Walk Score

y = -0.06x + 38.38

3 BDR Homes % Growth - VS - Walk Score

y = 0.13x + 25.2

% Growth - VS - Crime Rates

y = -0.06x + 1097.9

- **Process**
  - We started with multiple data sets and API's from Zillow, Zip-Code, Walk Score, State of California and Google Maps
  - We created data frames and over laid them on google maps
  - We looked at all the data to come to our conclusions

- **Problems / Constraints**
  - Pulling of data by zip code and county was difficult as we found mis-matches
  - Lack of access to API due to max number of pulls, need to download data sets
  - We found that different sites and apps were not comprehensive enough
  - We could not find enough trend data to answer our questions
  - Data integrity from Zillow sources
  - Some other insights that would have been interesting to see: What are people thinking about the housing market?

- **Key Findings and Outcomes**

  - Identified **top cities with highest growth in property value, or Rental ROI**: Manhattan Beach, Sacramento, Stockton, Encinitas, Joshua Tree, Modesto, Hermosa Beach, Garden Acres, Oakland.

  - Identified the **zip-codes to avoid**, due to growth less than 3% (including negative growth).

  - Understood shift in market price: Too many outliers, yet **middle 50% of the data shifting right**.

  - No correlation between property value increase, walk score, bike score and crime rates.

  - 0.6 R-square between the growth of 2-Bdrm properties with 3-Bdrm properties.

  - **Tool** that helps investors choose where to invest.

YES

We understood…

No

Some unknowns…
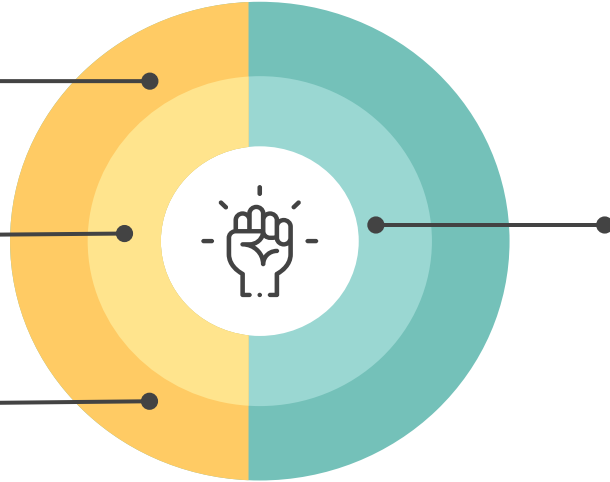
👍 **Where to invest**

👍 **Returns for Investment per area**

👍 **Built a tool to identify investments based on your preferences**

What about the effects of COVID?

- Mobility in and out of California…

- Market adjustments…

While investing now might make sense, would investing later yield higher return?

Questions