REAL ESTATE
MARKETING PLAN

Recommendation for San Diego RE
Market Investors

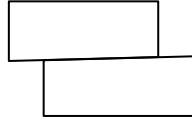Due to work from home trend, people are moving from Bay area to South California

Investors invest in Real Estate Market due to inflation risk

FOR RENT

San Diego house price increases 25% in a year and become one of hottest nationwide real estate market.

What area and what type of residential properties to invest? Which has good cash flow or value growth potentials?
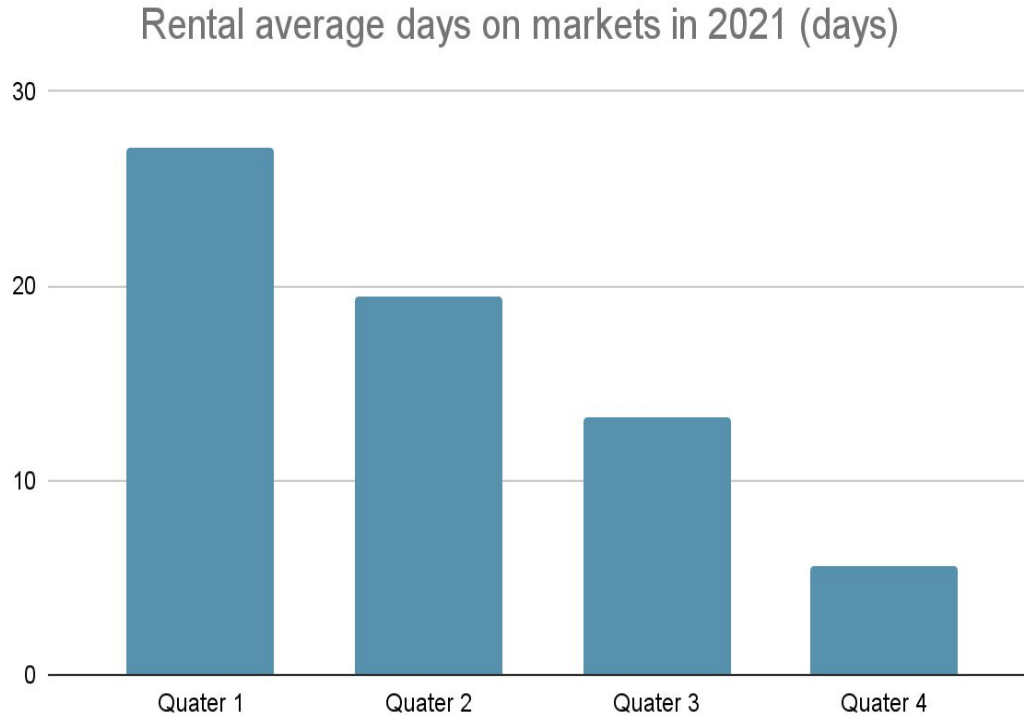
Find properties with good rent to value ratios and those with good value growth.

PROBLEM

SOLUTION
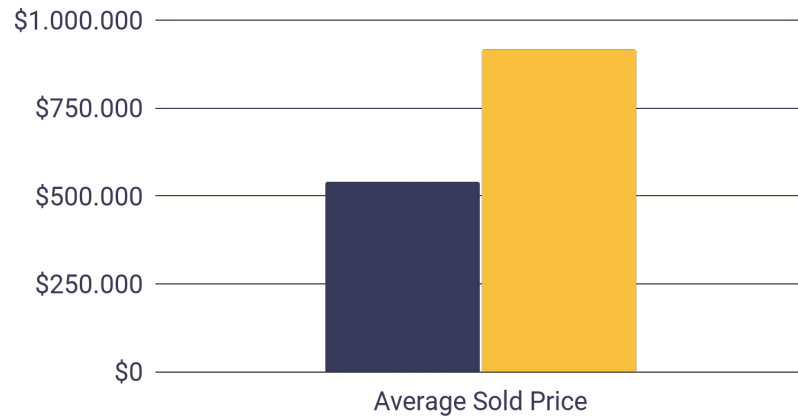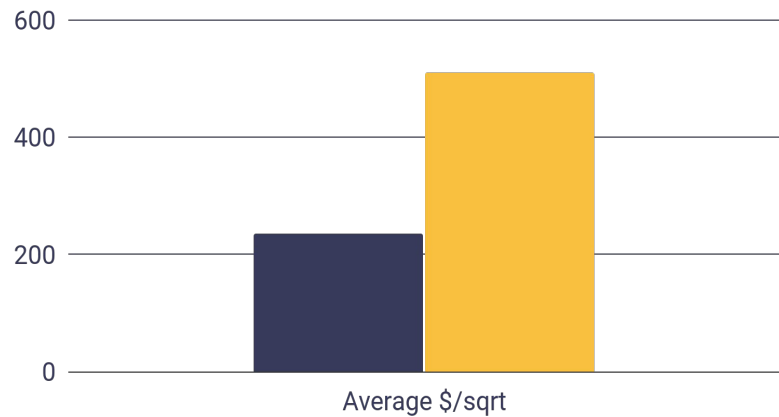
Collect Data

Purchasing and rental transaction records can be found in the San Diego Multiple Listing System(MLS).

EDA

Calculate rent_to_value ratios and value growth percentage for different house (based on combination of several features)

Future work: Collect complete rental data

Future work: Advanced algorithm

EDA Insight-
Rent_to_value ratio and Days on market by zip code
(link)

EDA Insight-
Recommend by individual house
(link)

EDA Insight - Recommend by Weighted Index for rentals (top 10)

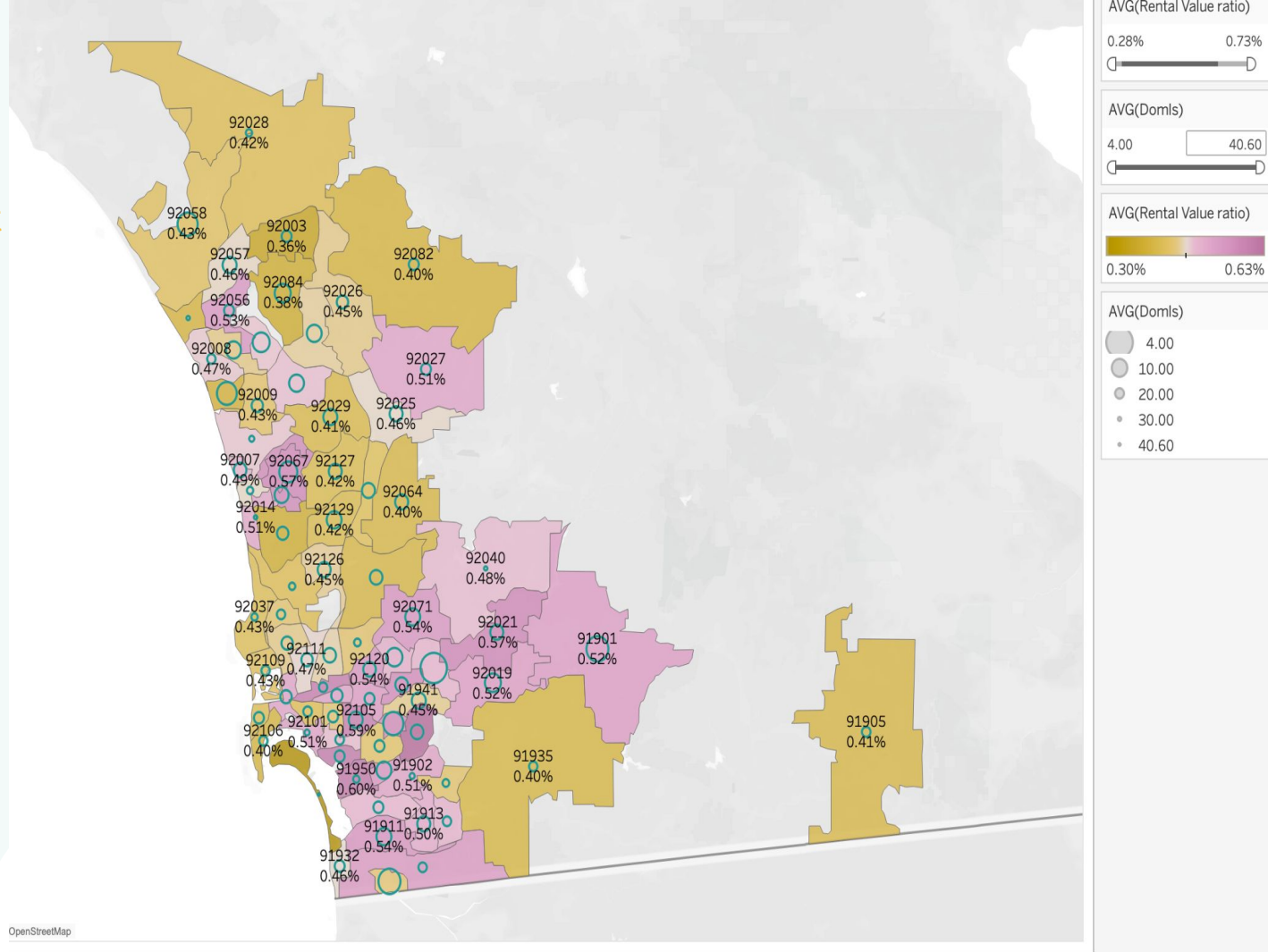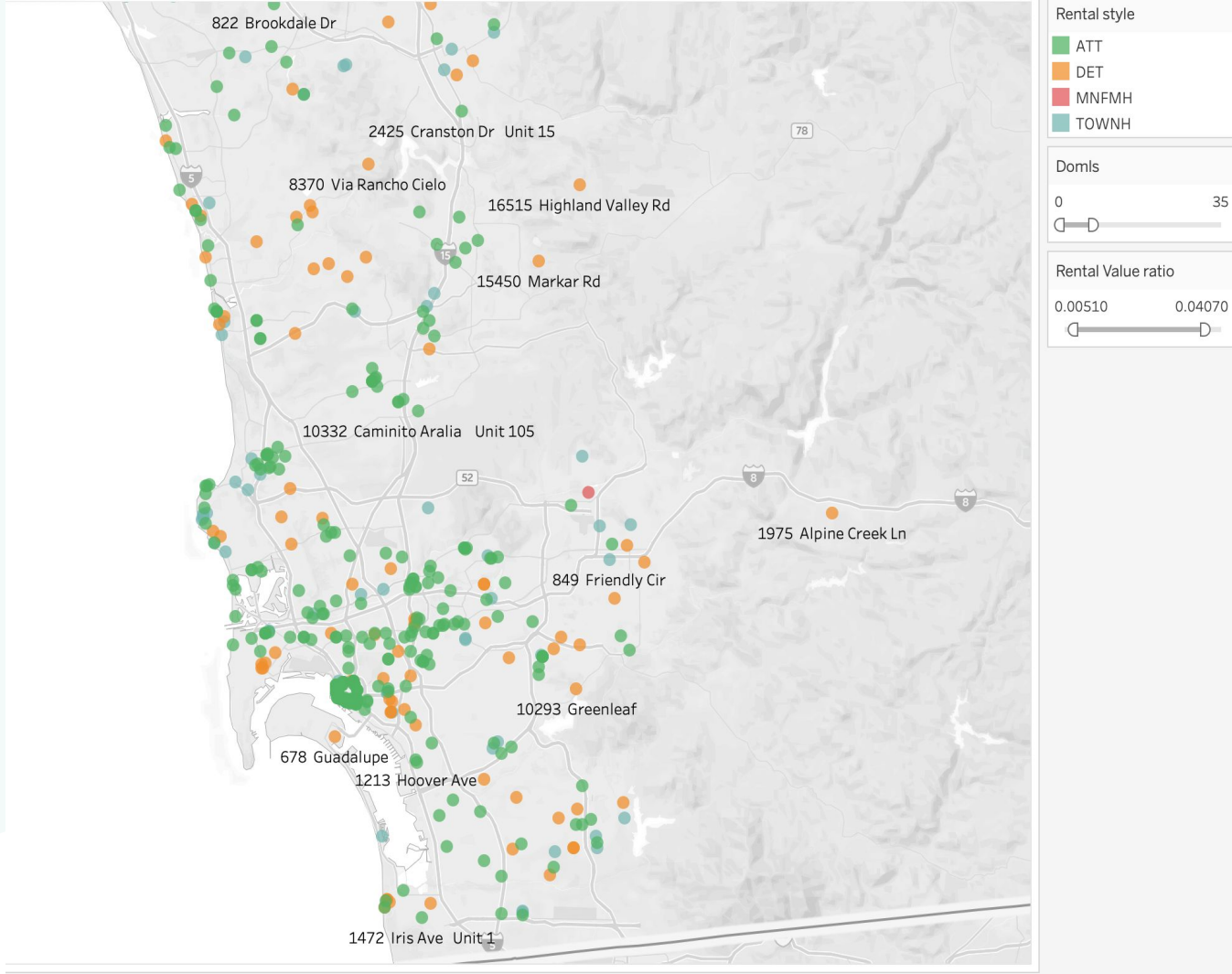| Zip	Rental_style	sqrt_range	AVERAGE of Rented Price	AVERAGE of Rental_Value_ratio	AVERAGE of DOMLS	Weighted recommend index
91977	ATT	500 - 999	$1,889	0.79%	15.8	5.68
92108	ATT	500 - 999	$2,740	0.73%	18	4.64
92014	ATT	500 - 999	$3,994	0.69%	22.67	3.66
92109	ATT	0 - 499	$1,710	0.61%	16	2.71
92115	ATT	500 - 999	$1,845	0.60%	9.29	2.66
92120	ATT	500 - 999	$1,878	0.59%	10.8	2.44
92107	ATT	0 - 499	$1,575	0.59%	18.2	2.21
92024	ATT	500 - 999	$3,029	0.58%	21.2	1.96
92105	ATT	500 - 999	$1,556	0.56%	16.22	1.85
91932	DET	1500 - 1999	$4,282	0.56%	15.17	1.75

Weighted index

Standardize Rental_to_Value_ratio and DOMLS (days on market), calculate weighted index (3:-1) and each combination should have at least 5 rental data to decrease the impact of individual nosies.

EDA Insight-
Value growth by zip code from 2012 - 2021
(link)

Zip1	p1	2021
92113		235.2%
92105		187.2%
91950		163.8%
92102		162.9%
92114		159.0%
92139		155.1%
92173		152.5%
91977		147.9%
91906		147.3%
91945		144.7%
92054		143.8%
91932		141.6%
92008		141.1%
92086		140.4%
92115		139.1%
92061		139.1%
92083		138.0%
92154		136.3%
92075		136.3%
92057		136.2%
91913		134.8%
92025		134.7%
92007		134.3%
92020		133.7%
92036		133.1%
91916		132.5%
91911		132.1%
92108		132.0%
92040		129.9%
92126		129.5%

% Difference in Avg. SP$/SqFt
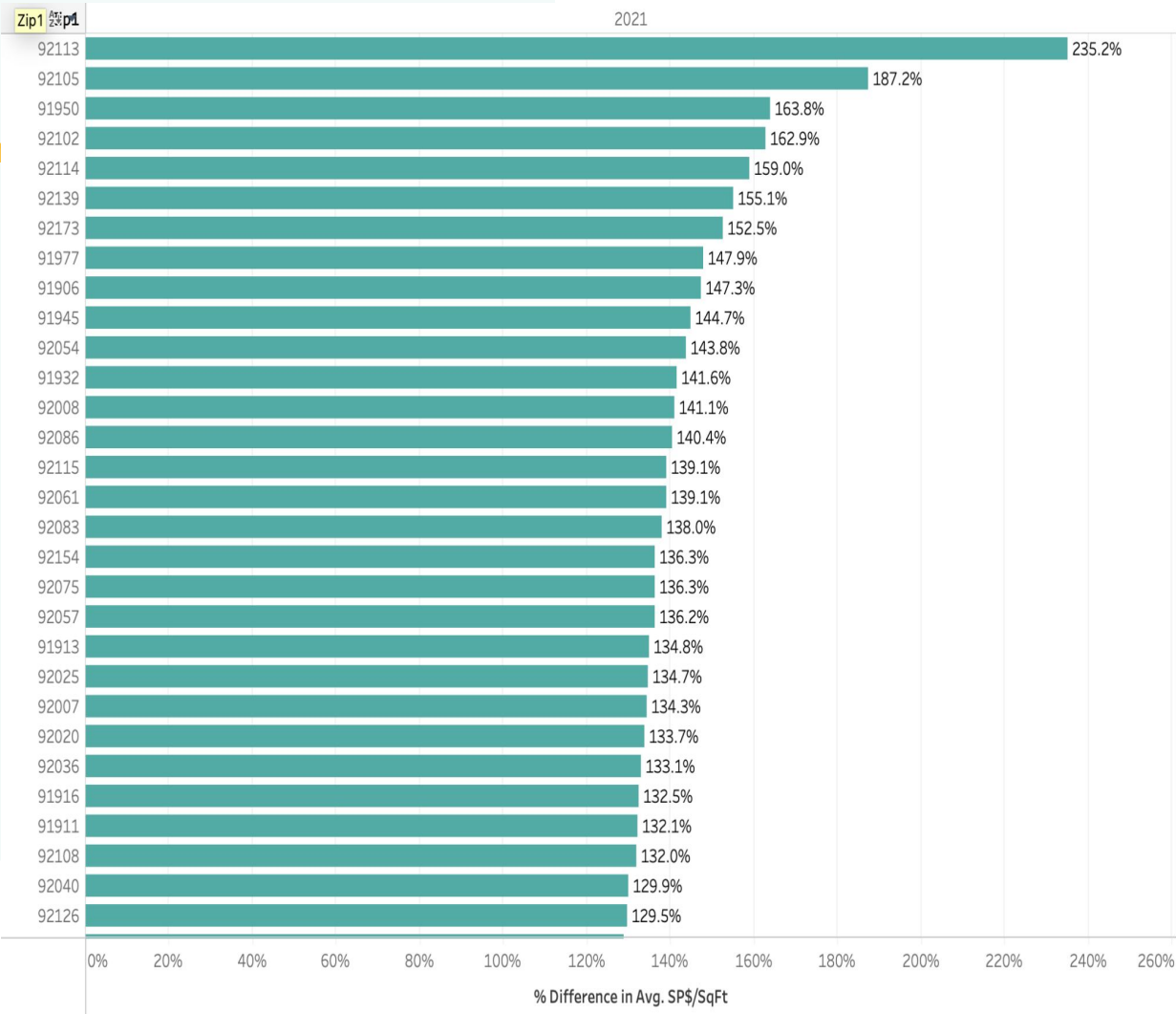
EDA Insight- Value growth by house type and size from 2012 - 2021

Growth_by_type

Type	Avg. Growth Ratio ($/sqrt)
MOBHM	231.37%
MDLRH	147.57%
ATT	147.56%
TOWNH	135.04%
TWINH	128.92%
DET	121.59%
MNFMH	82.91%
ROWHM	72.69%

Avg. Growth Ratio ($/sqrt)

Growth_by_size

SF Ran..	Avg. Growth Ratio ($/sqrt)
0 - 499	210.05%
500 - 999	159.90%
1000 - 1499	139.10%
1500 - 1999	122.65%
2000 - 2499	112.77%
4500 - 4999	111.97%
2500 - 2999	106.04%
4000 - 4499	101.71%
5000+	101.51%
3000 - 3499	99.34%
3500 - 3999	98.57%
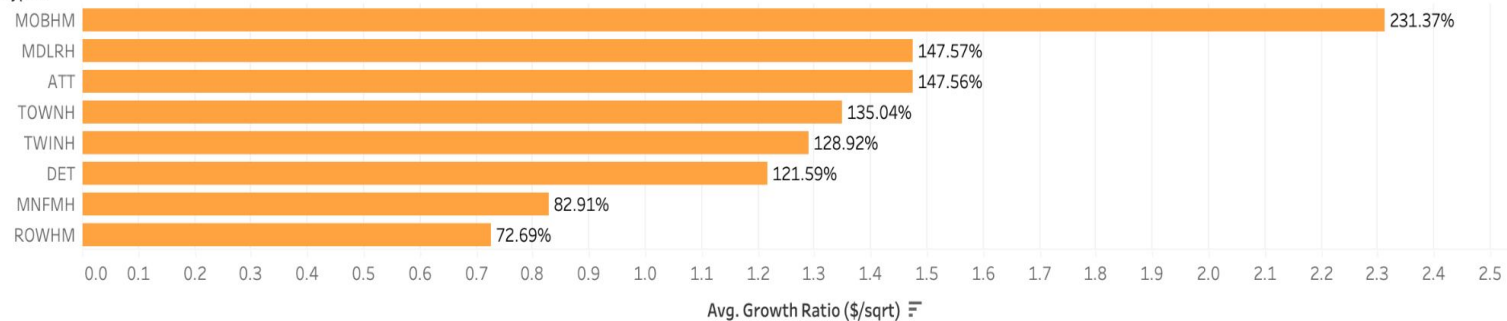
Avg. Growth Ratio ($/sqrt)
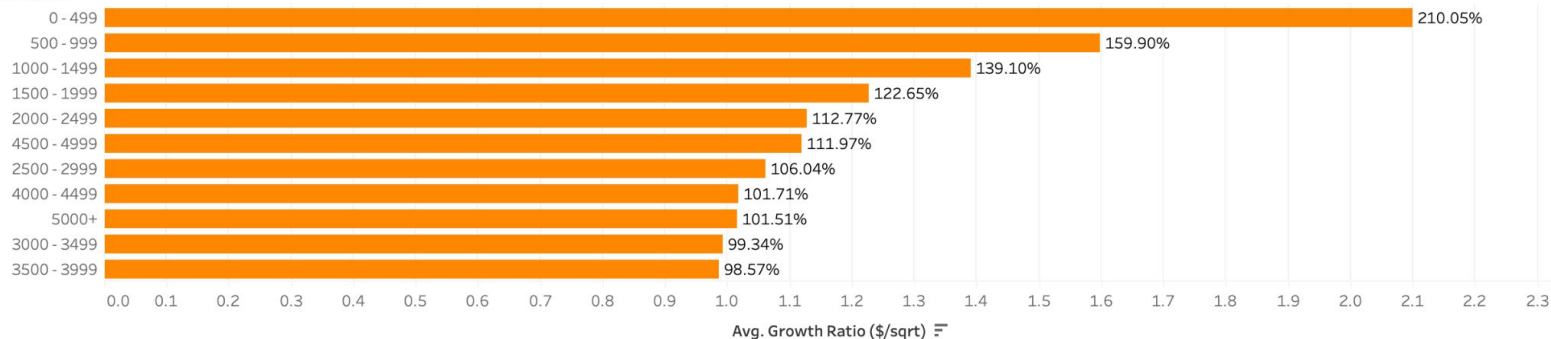
EDA Insight - Value growth by zip code & type & SF_range (top 10)

Zip code	Type	SF_Range	Average_soldprice_2021	Average_soldprice_2012	Growth Ratio (sold price)	Average_$/sqrt_2021	Average_$/sqrt_2012	Growth Ratio ($/sqrt)
92007	ATT	1000 - 1499	$1,302,500	$364,019	257.81%	$1,104.19	$288	283.08%
92102	ATT	0 - 499	$243,716	$87,500	178.53%	$683.62	$181	278.14%
92040	ATT	500 - 999	$315,901	$85,750	268.40%	$384.34	$106	262.44%
92113	DET	500 - 999	$504,944	$149,145	238.56%	$658.67	$184	257.38%
91902	ATT	500 - 999	$318,500	$87,867	262.48%	$498.96	$141	253.28%
92105	ATT	1000 - 1499	$478,125	$130,080	267.56%	$386.09	$110	250.91%
92105	ATT	500 - 999	$296,075	$86,658	241.66%	$405.83	$117	246.44%
91977	TOWNH	1000 - 1499	$448,833	$132,795	237.99%	$392.34	$113	246.35%
92025	ATT	1500 - 1999	$636,833	$181,750	250.39%	$381.99	$111	242.70%
92083	ATT	500 - 999	$343,658	$102,625	234.87%	$417.53	$123	239.24%

Each combination should have at least 10 selling data to decrease the impact of individual nosies.

Tableau video clip (link)
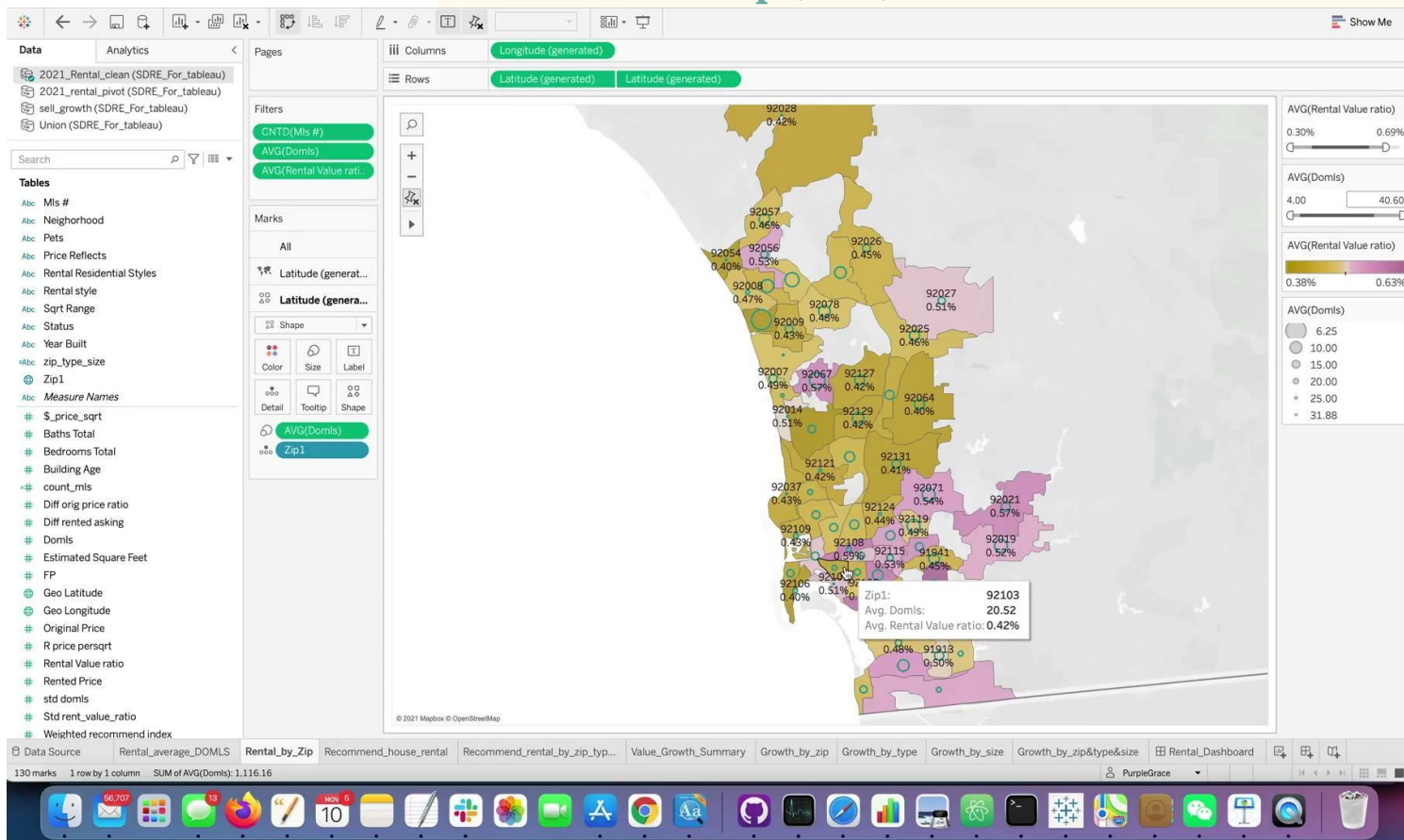
Future work

- Linear regression model to predict house value, so that investors can find properties with better rent_to_value ratio.
- Time series model to forecast future house value, so that investors to find properties with good value growth potentials.
- Clustering Algorithms to help find good substitutes when desired property type is not available on the market.

Thanks

& Questions