

Can people in the US afford homes today?

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Data Source



Housing Price Data



Personal Saving Rate Data



Salary Data

Data Pre-processing

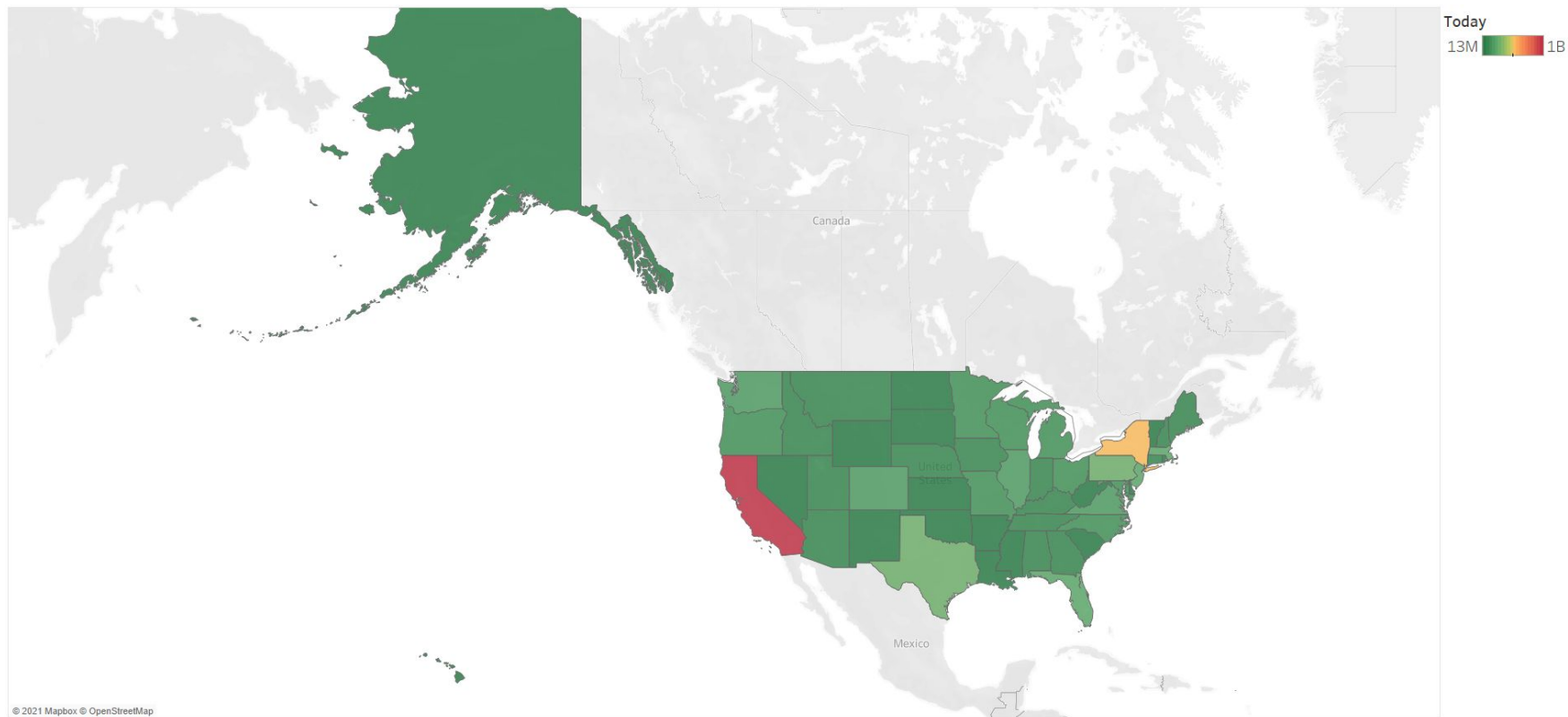
- Remove unnecessary columns
- Rename column names
- Deal with missing values
- Data Transformation

RegionID	SizeRank	RegionName	RegionType	StateName	State	City	Metro	CountyName	1/31/1996	2/29/1996	3/31/1996	4/30/1996	5/31/1996	6/30/1996	7/31/1996
84654	1	60657 Zip		IL	IL	Chicago	Chicago-Naperville	Cook County	381952	381188	380605	379933	378569	378236	377525
91982	3	77494 Zip		TX	TX	Katy	Houston-The Woodlands	Harris County	201351	201599	201402	200208	199065	198397	199164
84616	4	60614 Zip		IL	IL	Chicago	Chicago-Naperville	Cook County	588901	588436	587596	587531	585026	585045	584287
91940	5	77449 Zip		TX	TX	Katy	Houston-The Woodlands	Harris County	98062	98054	98012	98032	98027	97998	97954
91733	7	77084 Zip		TX	TX	Houston	Houston-The Woodlands	Harris County	98634	98658	98583	98575	98533	98513	98384
93144	8	79936 Zip		TX	TX	El Paso	El Paso	El Paso County	82792	82747	82717	82679	82761	82869	83000
84640	9	60640 Zip		IL	IL	Chicago	Chicago-Naperville	Cook County	276783	275027	273606	270865	268413	267431	266840
62037	10	11226 Zip		NY	NY	New York	New York-Newark	Kings County	216705	215555	214479	213132	212683	213406	214180
61807	11	10467 Zip		NY	NY	New York	New York-Newark	Bronx County	232116	231409	231121	229903	229433	228807	229208
92593	12	78660 Zip		TX	TX	Pflugerville	Austin-Round Rock	Travis County	153861	153690	153583	153482	153517	153617	153638
97564	13	94109 Zip		CA	CA	San Francisco	San Francisco-Oakland	San Francisco	555467	560196	563528	567020	567530	562148	559092
74101	16	37013 Zip		TN	TN	Nashville	Nashville-Davidson	Davidson County	109978	110425	110807	111598	112415	113254	114115
71831	17	32162 Zip		FL	FL	The Villages	The Villages	Sumter County	108777	109683	109843	110560	110597	110527	110497
84646	18	60647 Zip		IL	IL	Chicago	Chicago-Naperville	Cook County	181477	181990	182515	183362	183428	183787	184563

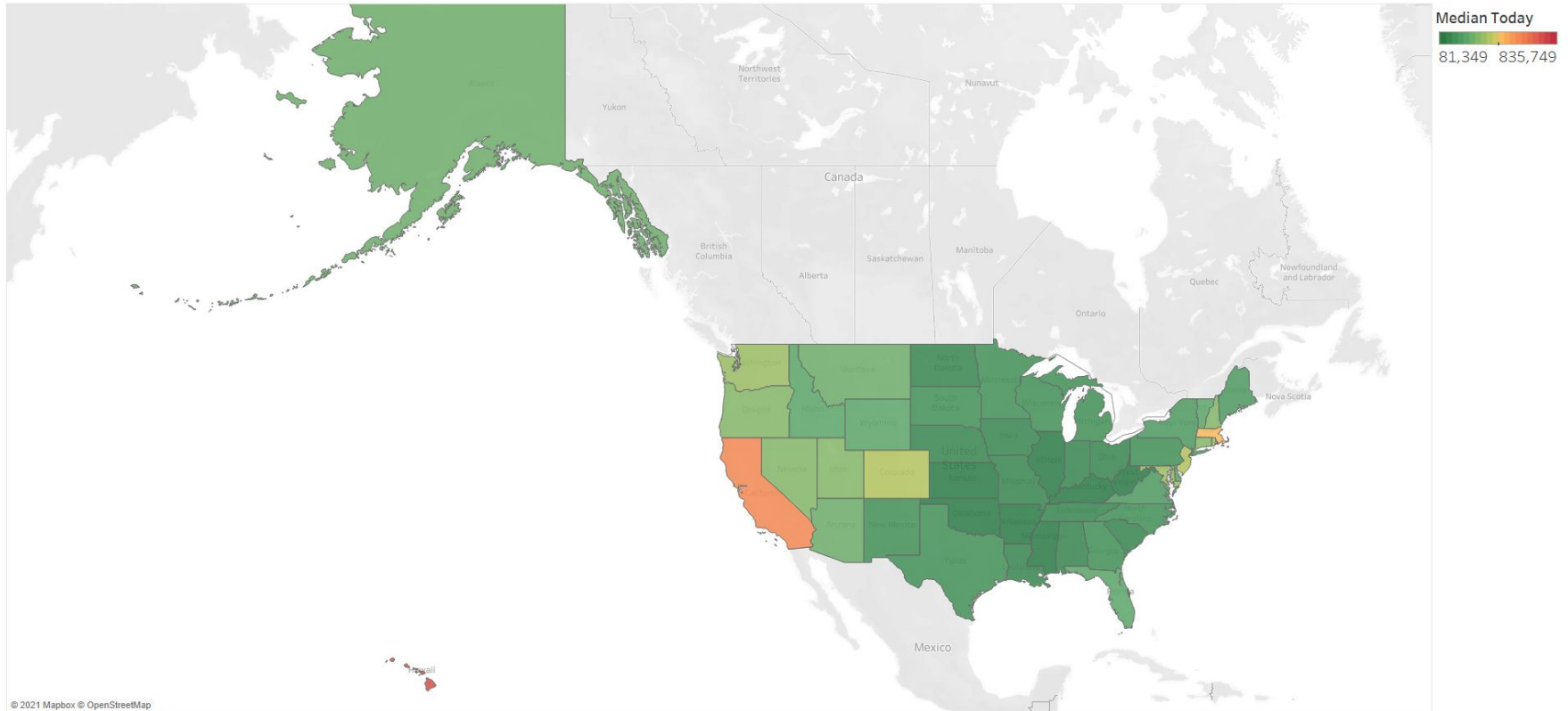
The housing price in the US has been increasing



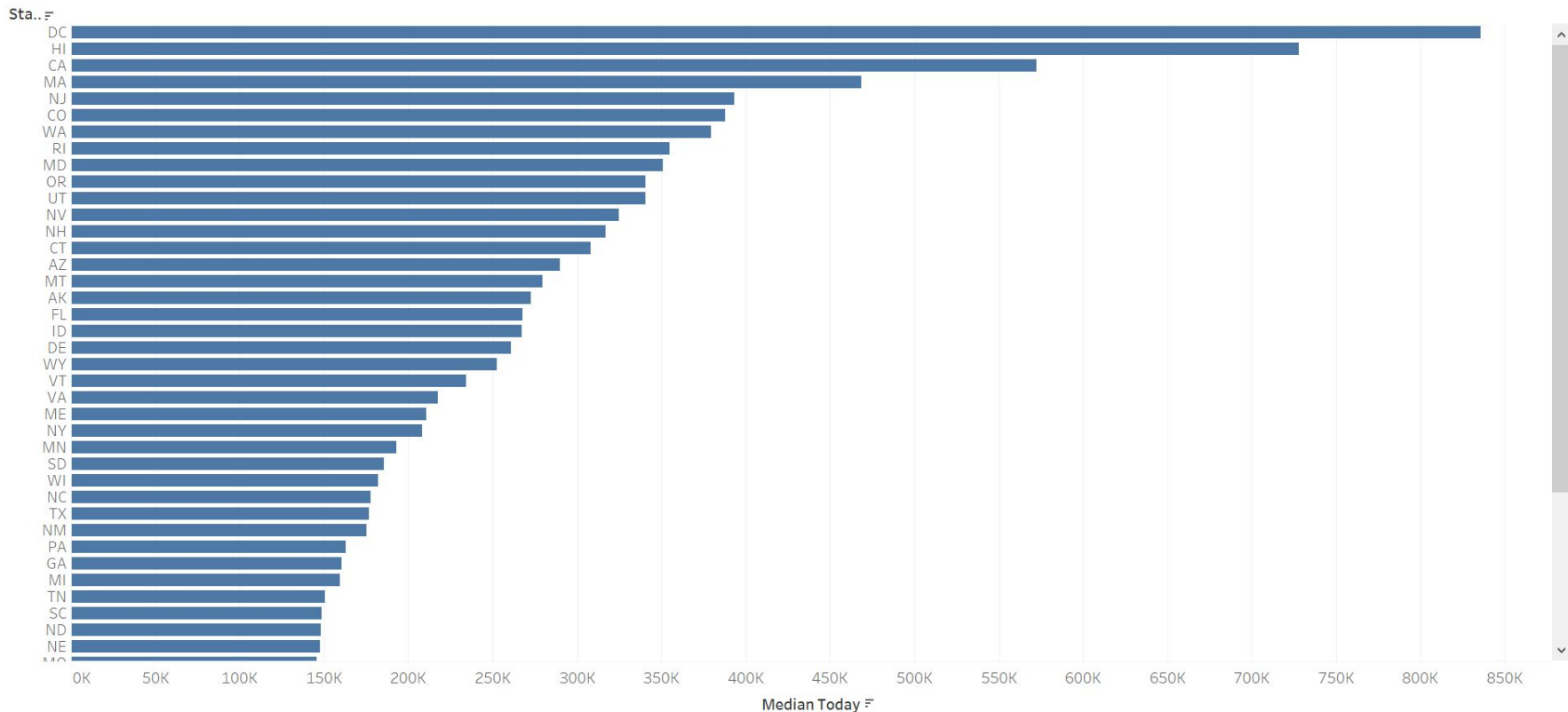
California and New York have the most expensive housing?



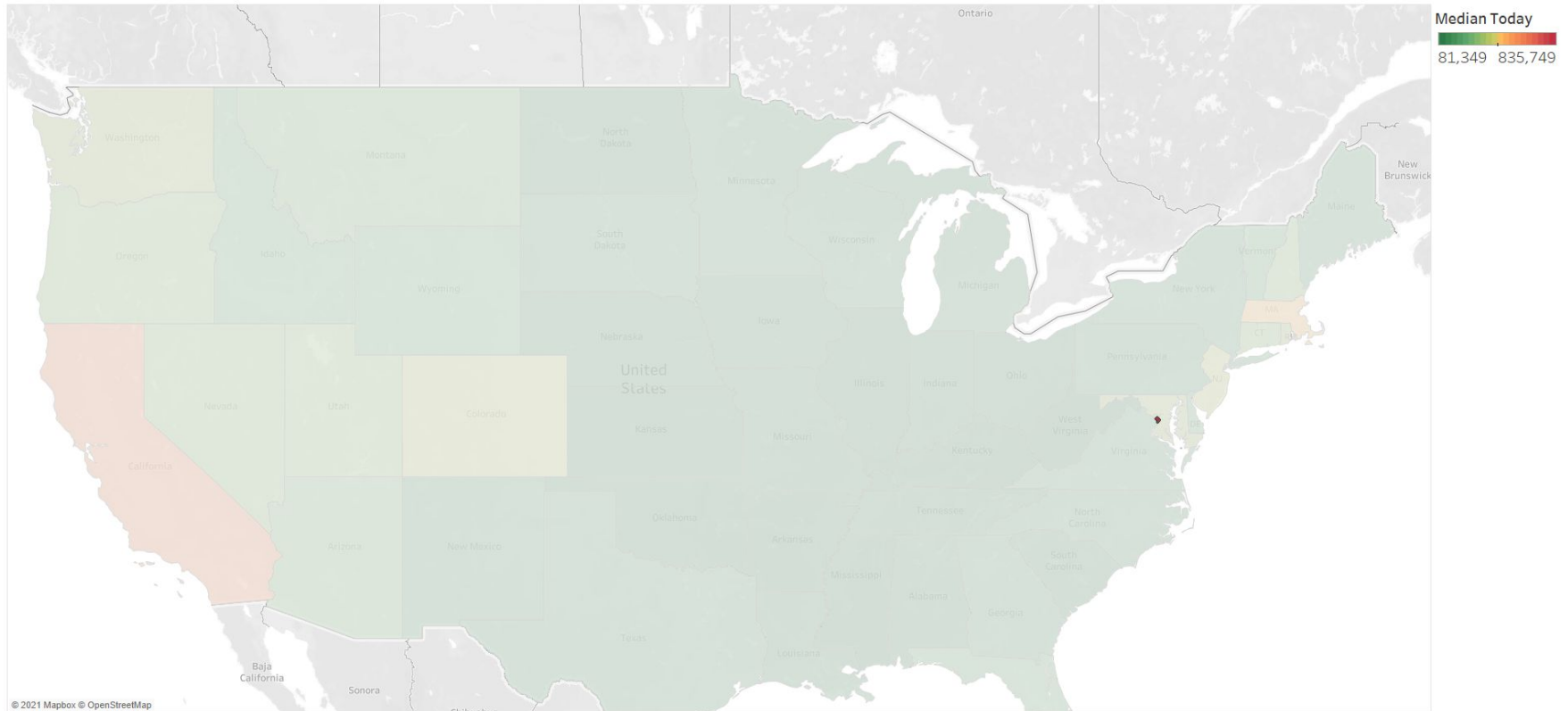
It seems like Hawaii has the highest housing price



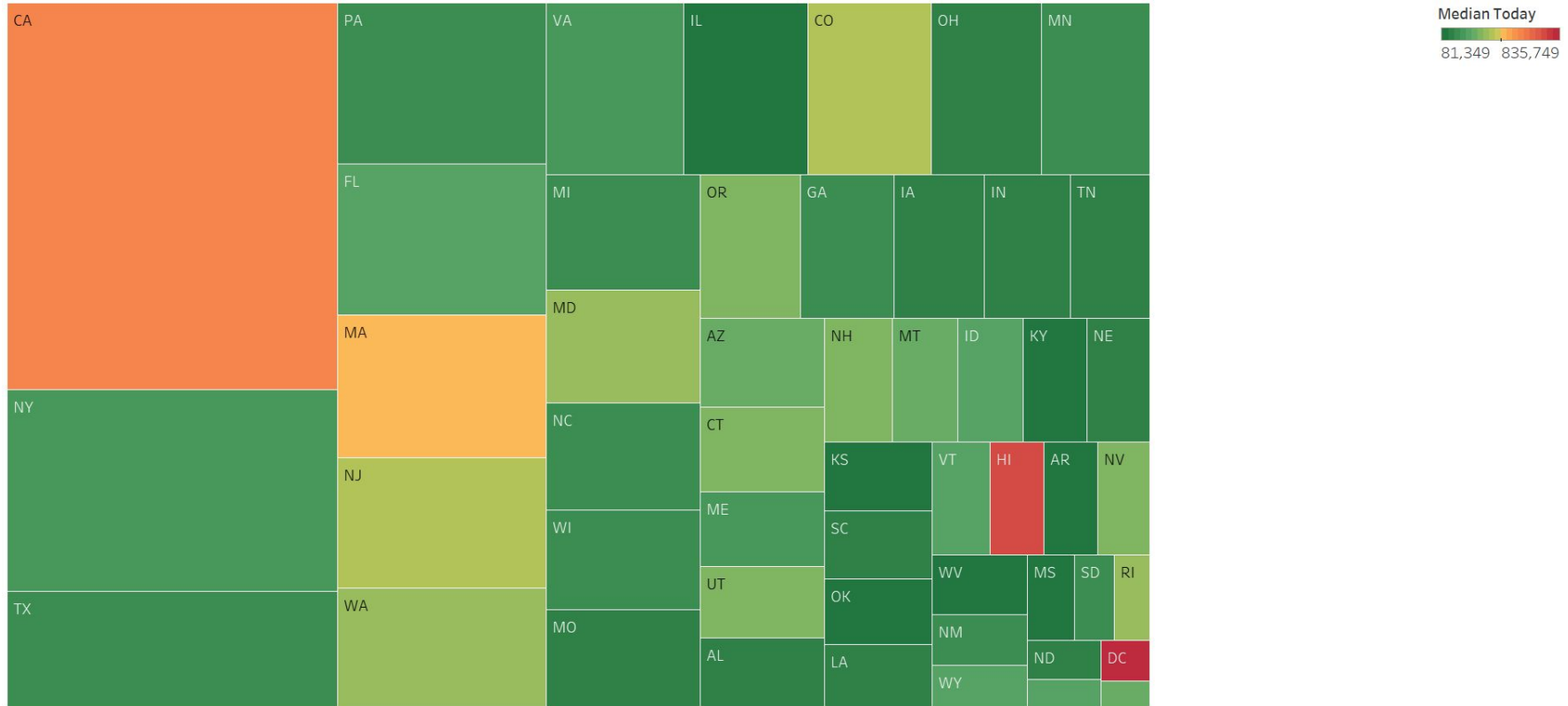
Washington DC is the most expensive state for housing



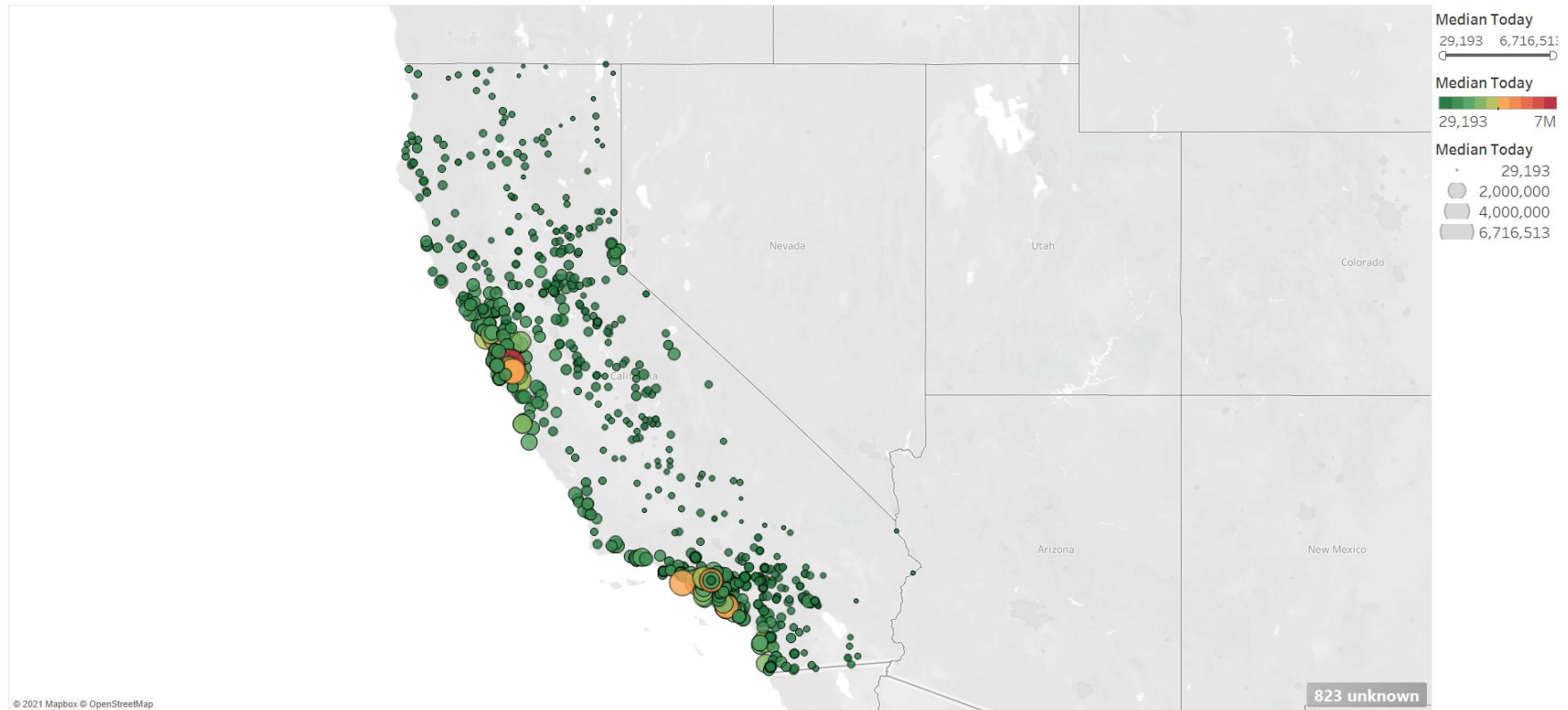
We can see more clearly from this graph



Size is number of houses, color is median housing price



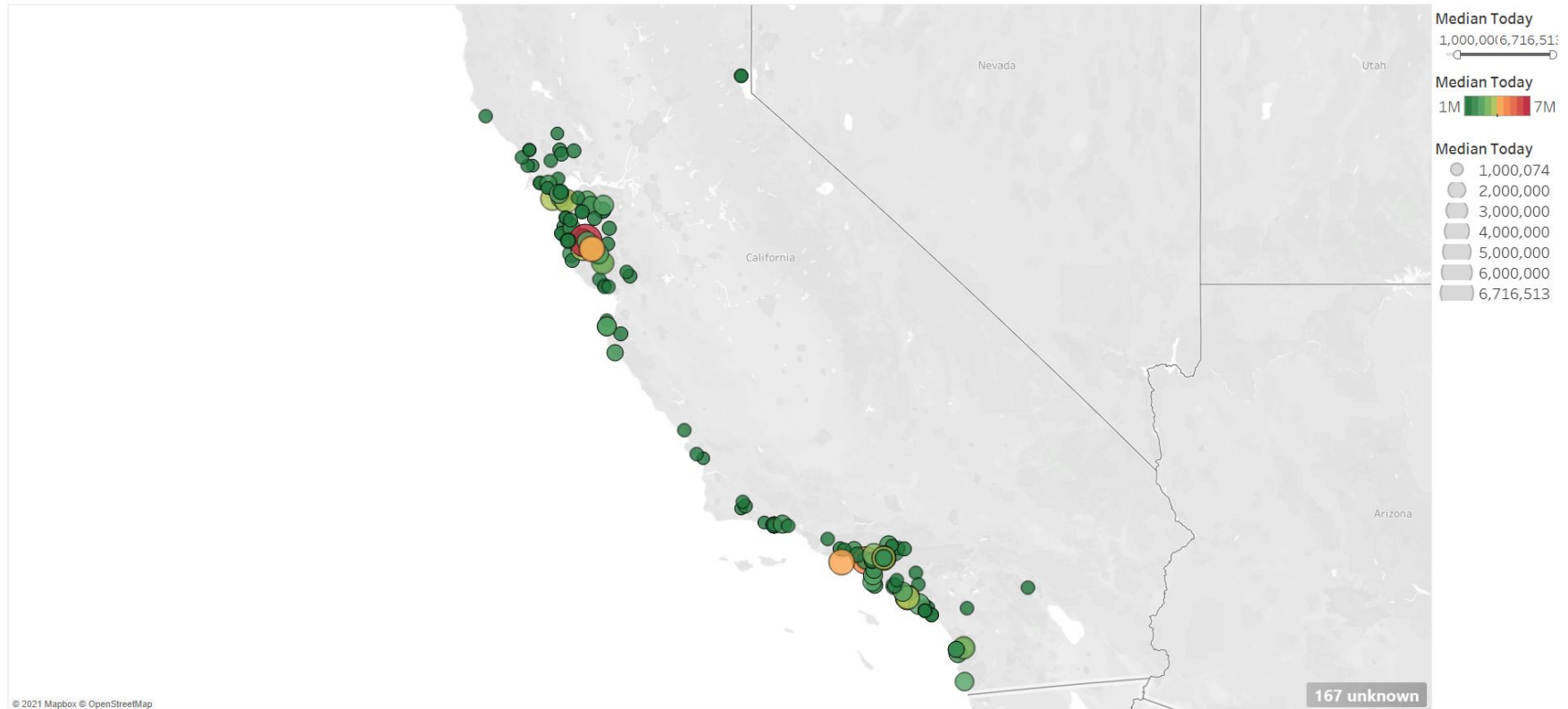
Look into more detail in California



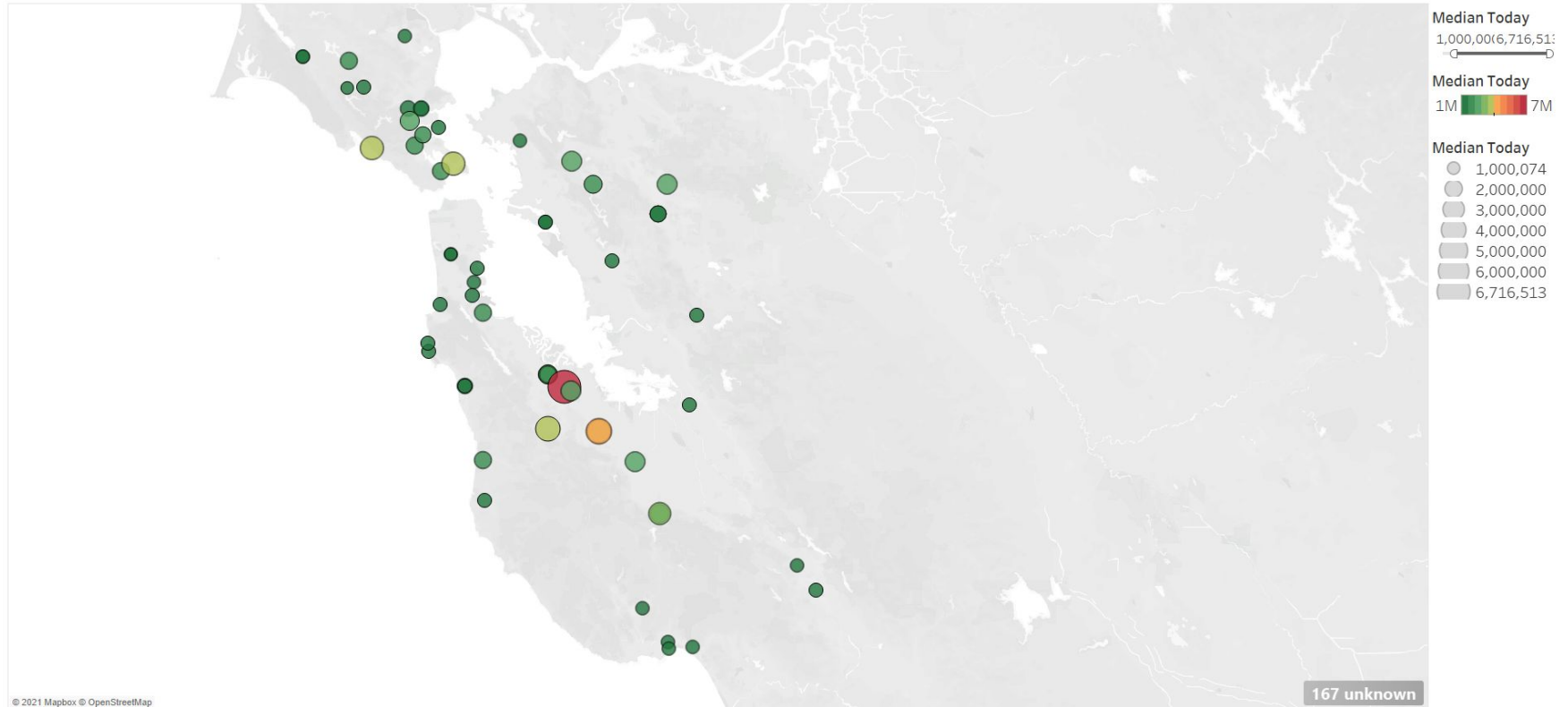
Housing price is also increasing in the past few years



Cities that median housing cost more than 1M



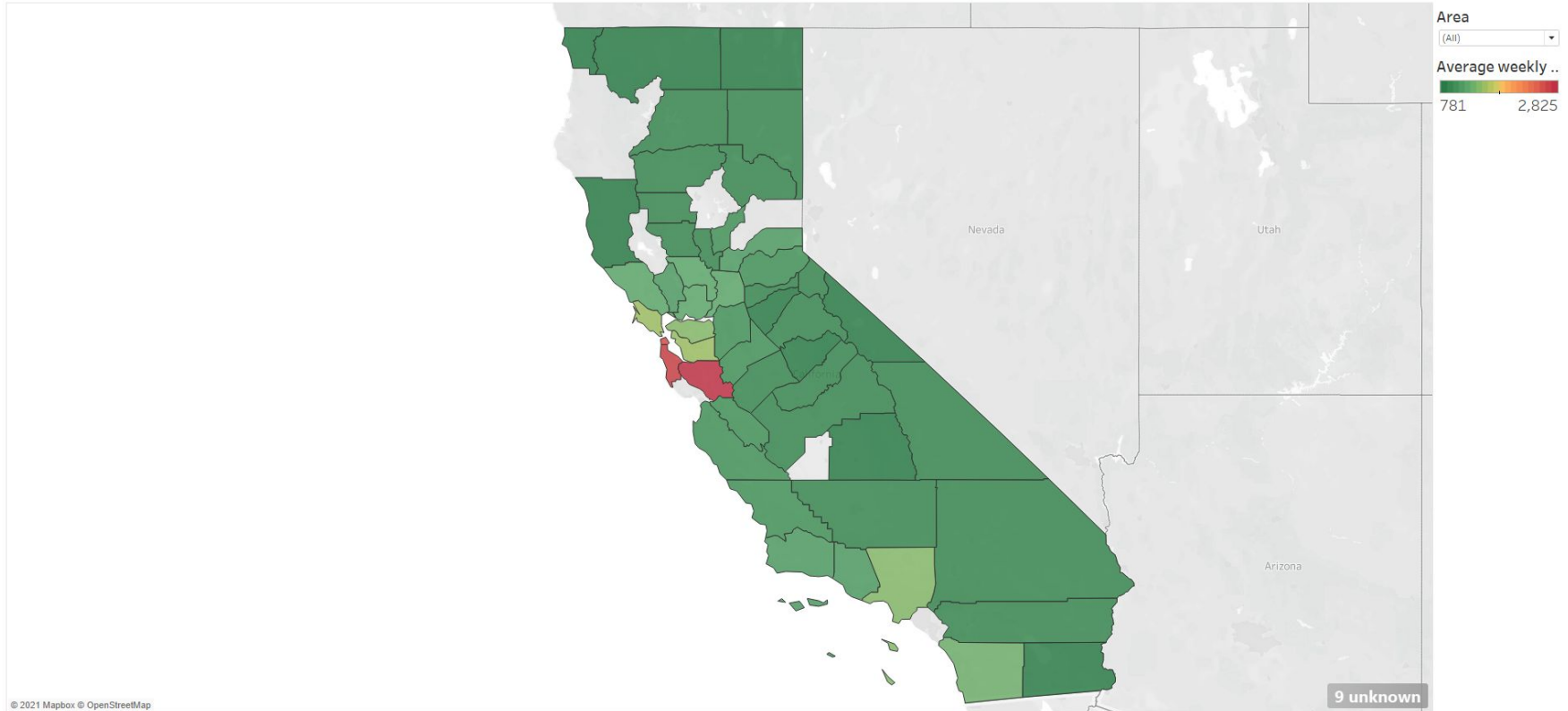
Bay Area



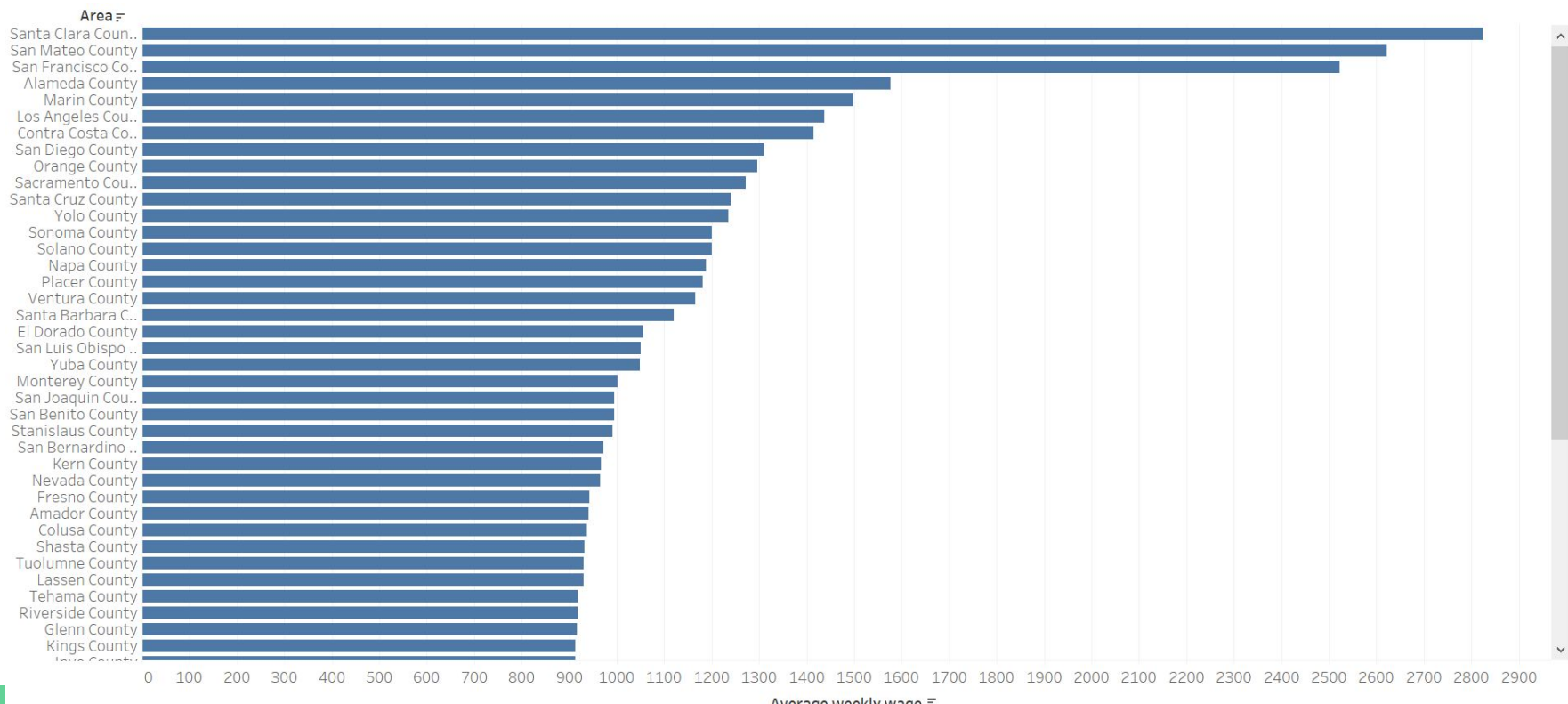
Artherton is the most expensive city for housing



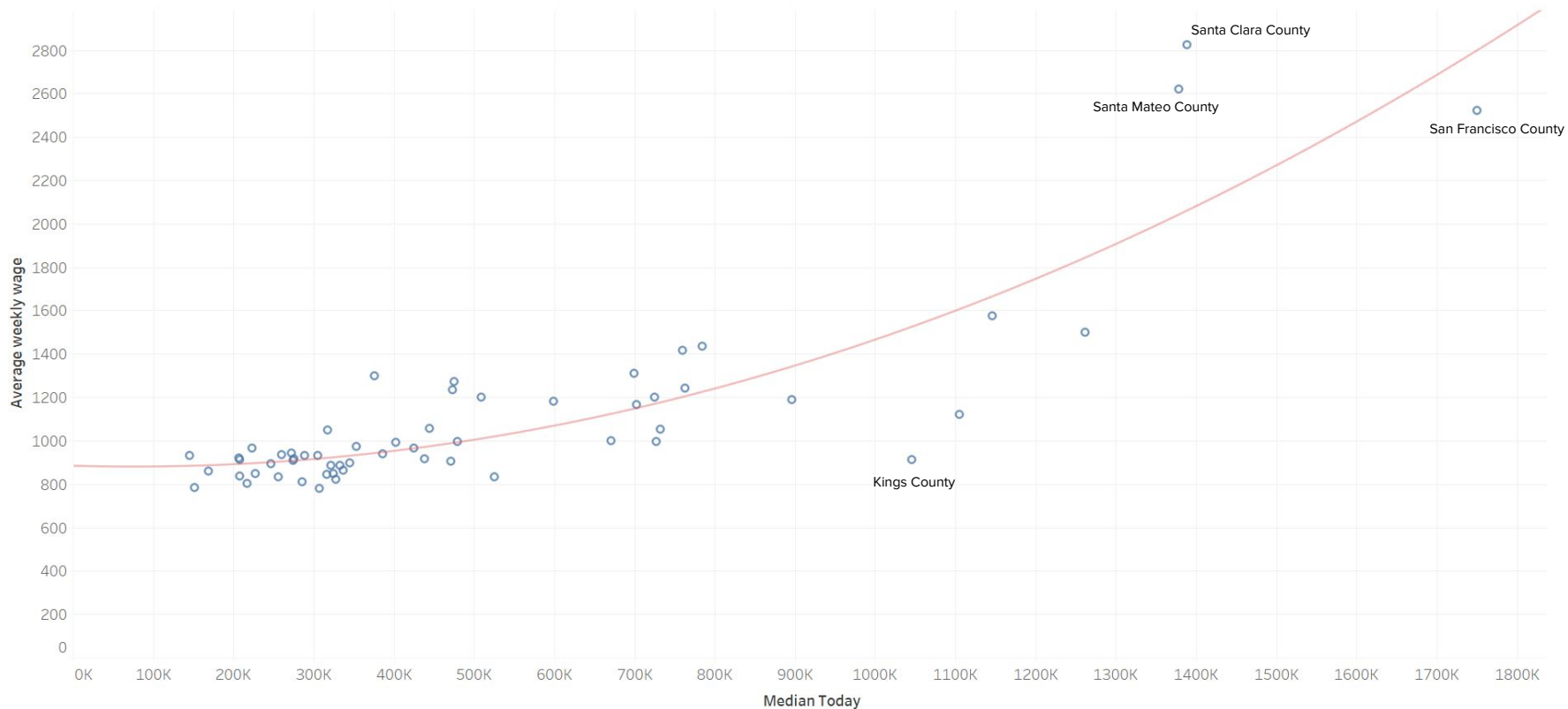
Average weekly wage in California counties



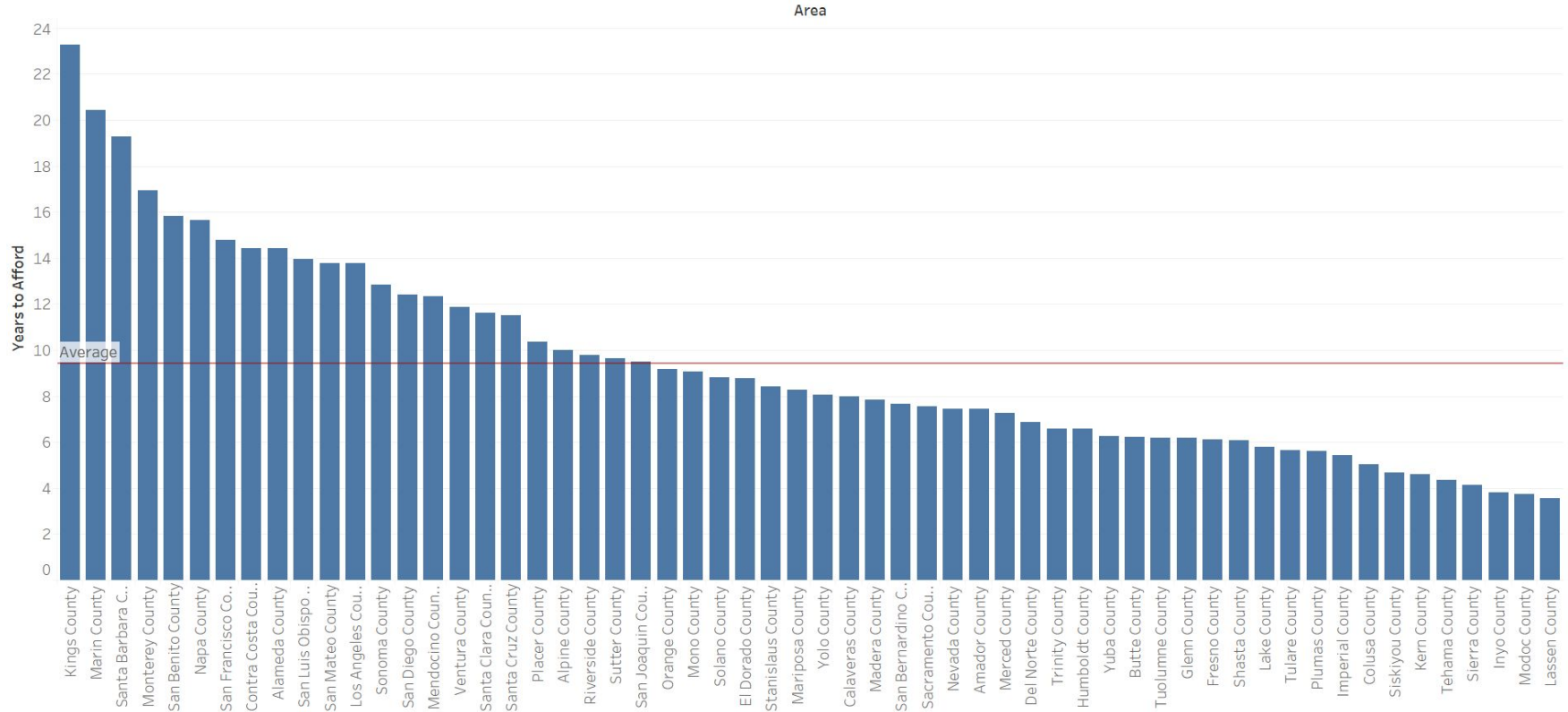
Top 5 highest salary counties are all in the Bay Area



Correlation between salary and housing price



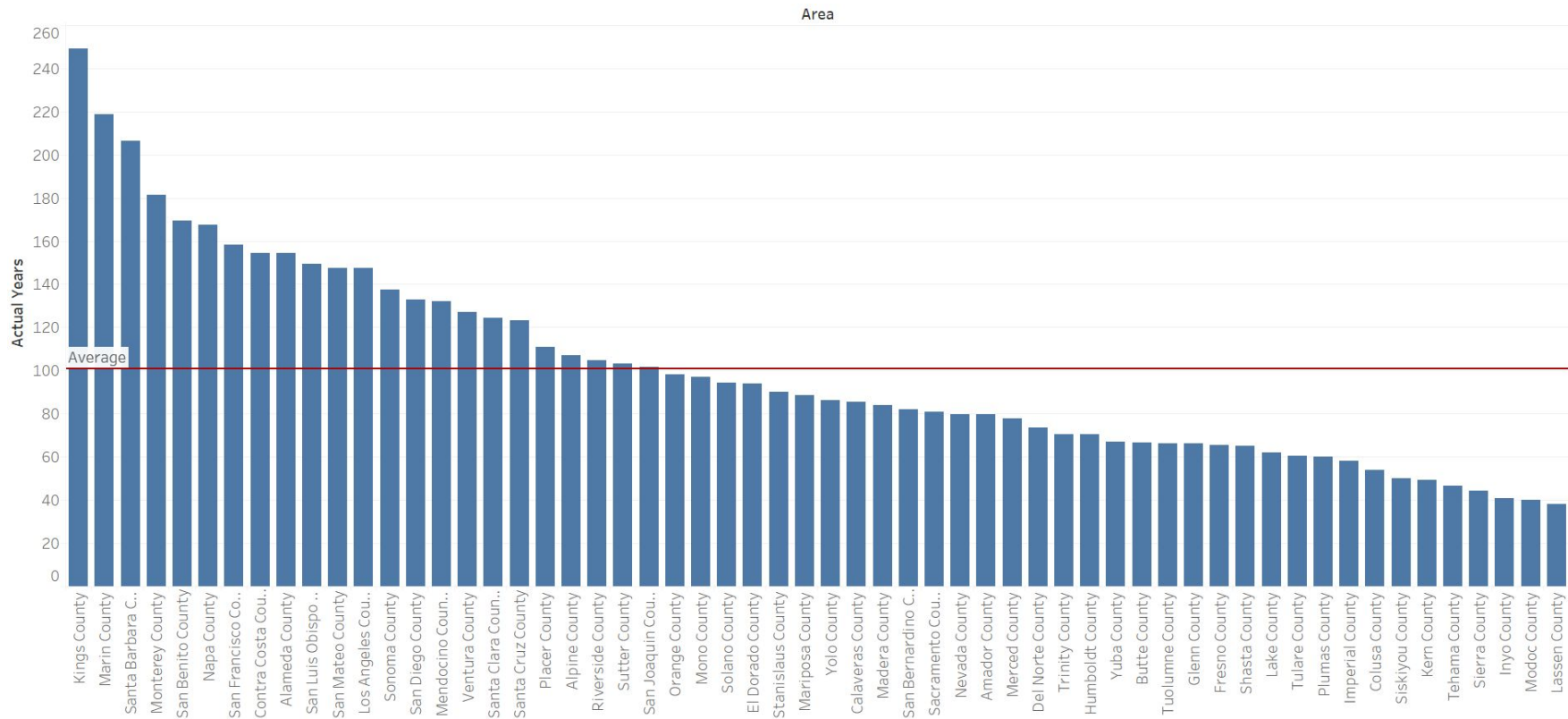
Average of 9.4 years are needed to buy a house



If consider the fact that people save 10% of their earnings...

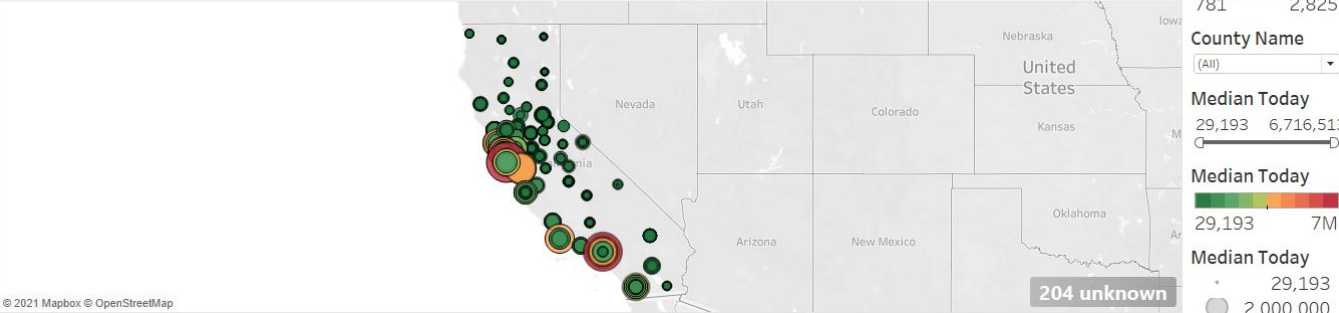


100 years are needed to afford a house

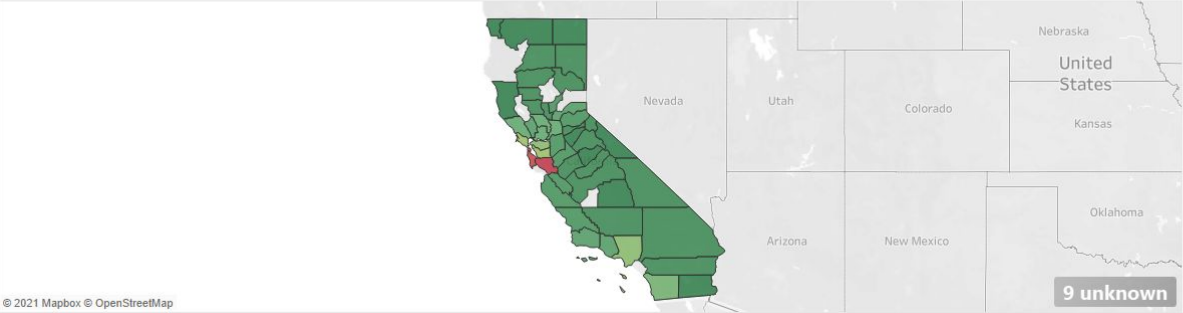


Dashboards

CA Housing



CA Salary



Future Works

- Take more factors that affect the abilities to afford a home into consideration
 - Investment/ Stock
 - Mortgage/ Mortgage rate
 - Housing price increase rate
 - Different saving rate in different counties
 - Winning lotteries?
- Expand the analysis to the entire nation or even the world

Thank you!
