

Investing Locally: 5 ZIP Codes in the Sacramento Region

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Flatiron School Data Science Boot Camp

Module 4 Project



Agenda

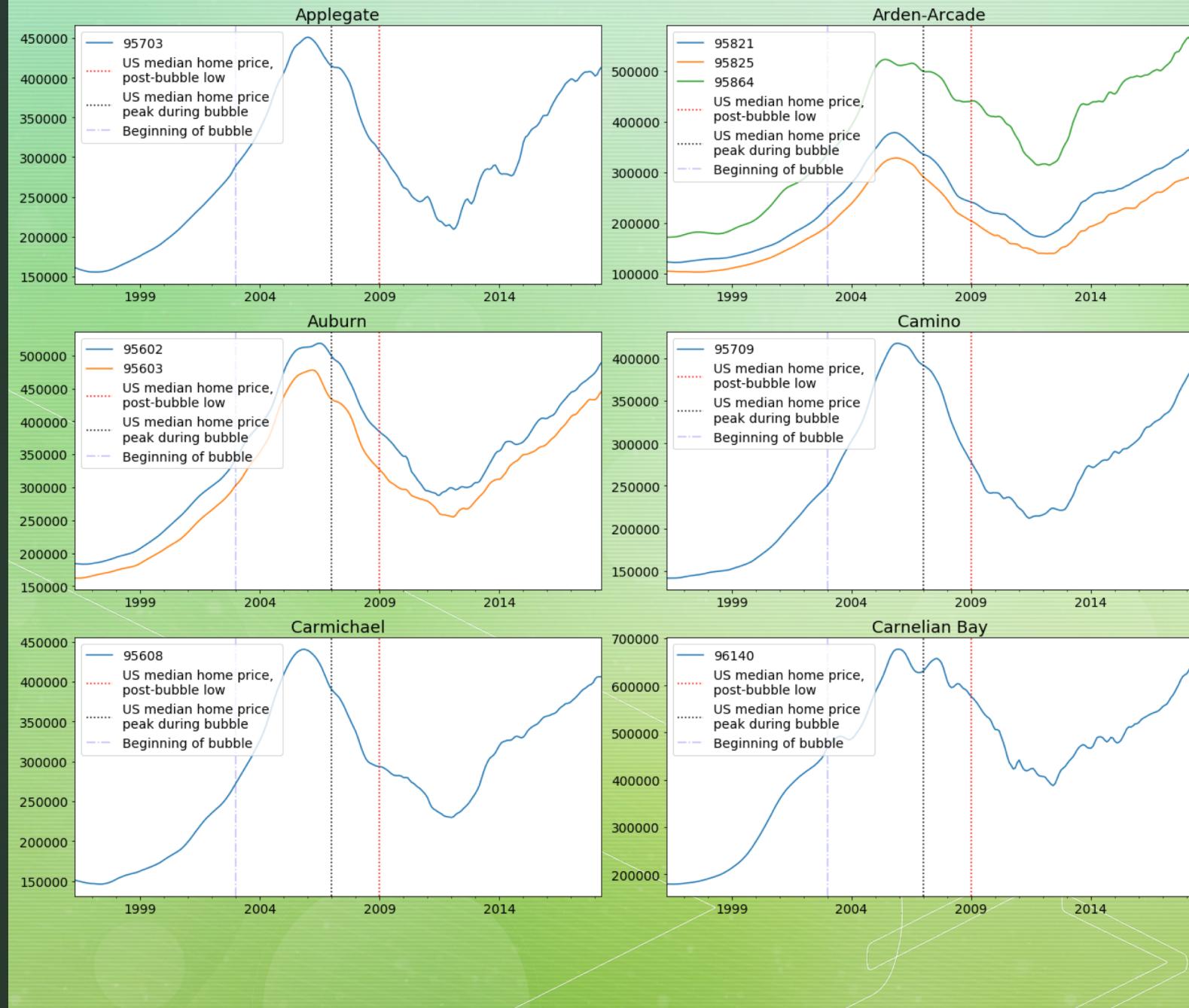
- Project Overview and Methodology
 - Evaluate ZIP Codes for potential investment opportunities
 - Methodology to analyze multiple ZIP codes and select 5
- Findings
- Recommendations
- Potential future work
- Q&A and acknowledgements

Project Overview

- Evaluate 5 best ZIP codes for investment opportunity
 - Data source: Zillow monthly housing values by ZIP in US
- Methodology
 - What is meant by “best”
 - Data exploration and visualization
 - Selected 20 ZIP codes for further analysis (“semi-finalists”)
 - Time series modeling
 - Forecasting 24 months

Creating multiple plots for certain geographies

- At right: example subset of Sacramento metro area home values by ZIP code and city
- See Appendix slides for complete set of plots by city in the Sacramento metro area



Findings

Results of semi-finalist ZIP code analysis

- El Dorado and Placer county ZIPs seem to offer better investment opportunities
- Recommending a mix of populations and locations
 - Around Lake Tahoe
 - East of Sacramento in Placer County (foothills of the Sierra Nevada)

	2018 value	City	Pop	County	Investment rating, based on predicted return	Predicted % Change	Worst Case % Change	Best Case % Change
ZIP code								
96150	432500.0	South Lake Tahoe	30000	El Dorado	excellent	16.93	-18.47	52.33
95672	579300.0	Rescue	4592	El Dorado	excellent	12.30	-11.10	35.71
95602	488700.0	Auburn	18290	Placer	excellent	11.94	-7.86	31.73
95619	321100.0	Diamond Springs	4359	El Dorado	excellent	10.80	-14.27	35.86
95746	386000.0	Granite Bay	22482	Placer	good	9.80	-11.96	31.55
95623	455700.0	El Dorado	3986	El Dorado	good	9.53	-36.53	55.59
95650	631000.0	Loomis	12600	Placer	good	6.59	-14.19	27.37
96140	644600.0	Carnelian Bay	1170	Placer	good	6.55	-13.04	26.14
95709	386000.0	Camino	4354	El Dorado	good	6.37	-16.59	29.33
95616	692300.0	Davis	45500	Yolo	mediocre	3.69	-10.50	17.89
95663	600700.0	Penryn	2468	Placer	mediocre	2.03	-21.47	25.53
95765	509200.0	Rocklin	41810	Placer	mediocre	1.73	-19.44	22.91
95811	567500.0	Sacramento_DosRios	7630	Sacramento	poor	0.55	-19.01	20.10
95818	563900.0	Sacramento_LandPark	21825	Sacramento	poor	-0.01	-17.61	17.59
95747	483800.0	Roseville	72437	Placer	poor	-1.30	-20.48	17.89
95614	423300.0	Cool	3882	El Dorado	poor	-3.95	-28.06	20.15
95636	241200.0	Somerset	1000	El Dorado	poor	-4.60	-31.27	22.06
95630	542900.0	Folsom	74111	Sacramento	poor	-10.82	-29.63	7.98
95831	449300.0	Sacramento_Pocket	42952	Sacramento	poor	-13.87	-34.87	7.14
95864	552700.0	Arden-Arcade	92186	Sacramento	poor	-18.75	-40.73	3.23

Findings

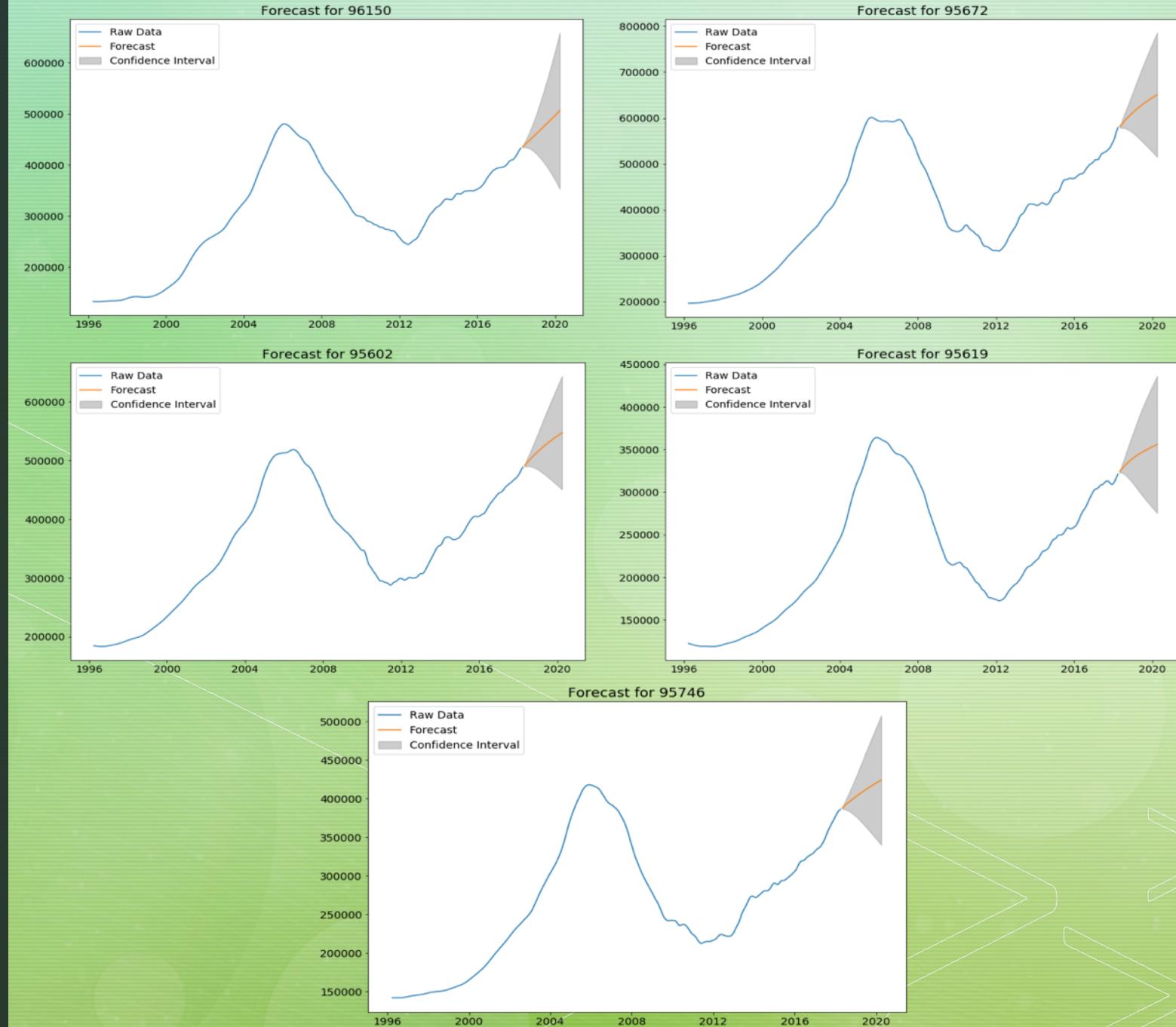
Results of ZIP code analysis

- I ranked the investment potential of each ZIP as follows:
 - Predicted returns < 1%: **poor**
 - Predicted returns > 1% and < 5%: **mediocre**
 - Predicted returns > 5% and < 10%: **good**
 - Predicted returns > 10%: **excellent**
- All ZIPs had negative worst-case scenario (WCS) returns
 - One of the top 5 ZIPs had WCS returns of less than -10%
 - The remaining 4 ZIPs had WCS returns of greater than -10% but less than -20%
 - If one of the top 5 predicted ZIPs also had a very bad downside (e.g., 95709—El Dorado), I would have excluded

ZIP code	2018 value	City	Pop	County	Investment rating, based on predicted return	Predicted % Change	Worst Case % Change	Best Case % Change
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95864	552700.0	Arden-Arcade	92186	Sacramento	poor	-18.75	-40.73	3.23

Investment recommendations:

- 96150 (S. Lake Tahoe)
- 95672 (Rescue)
- 95602 (Auburn)
- 95619 (Diamond Springs)
- 95746 (Granite Bay)





Possible Future Work

What

- Evaluating other metro areas, e.g., Dallas, Pittsburgh
- Back testing
- Analyzing shorter time frames (e.g., 2013-2018)
- Scaling investment by population size
- Construct a hypothetical investment basket
- Look at size of standard deviations

Why?

- Other metro areas might have greater upside
- Predict 2016-2018 values?
- More accurate if a shorter time frame were used?
- Larger populations in some ZIP codes
- Show potential returns from investment strategy
- Indicator of volatility/risk

Q&A



Thank you for your time!

