



# Zillow Time Series

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# Objective

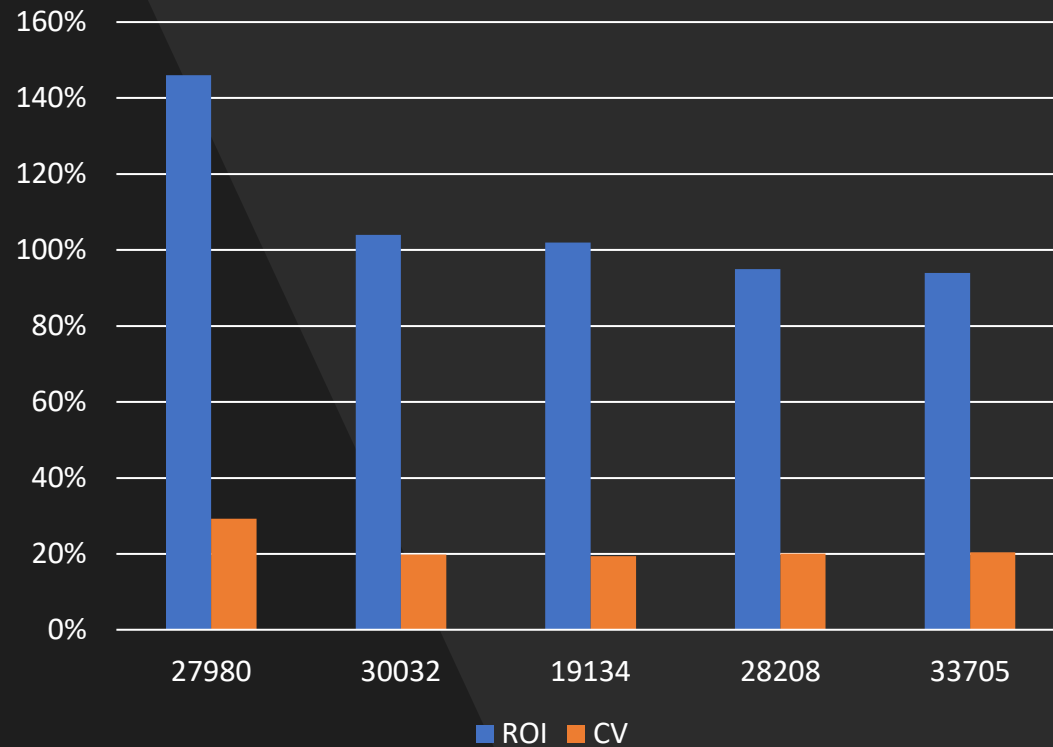
- Identify top areas to buy residential real estate for both short- and long-term investing
- ROI is metric of success, measured in both three- and ten-year horizons
- Use data to create model to predict prices
- USE RMSE to gage model predicting accuracy

# Data- Zillow

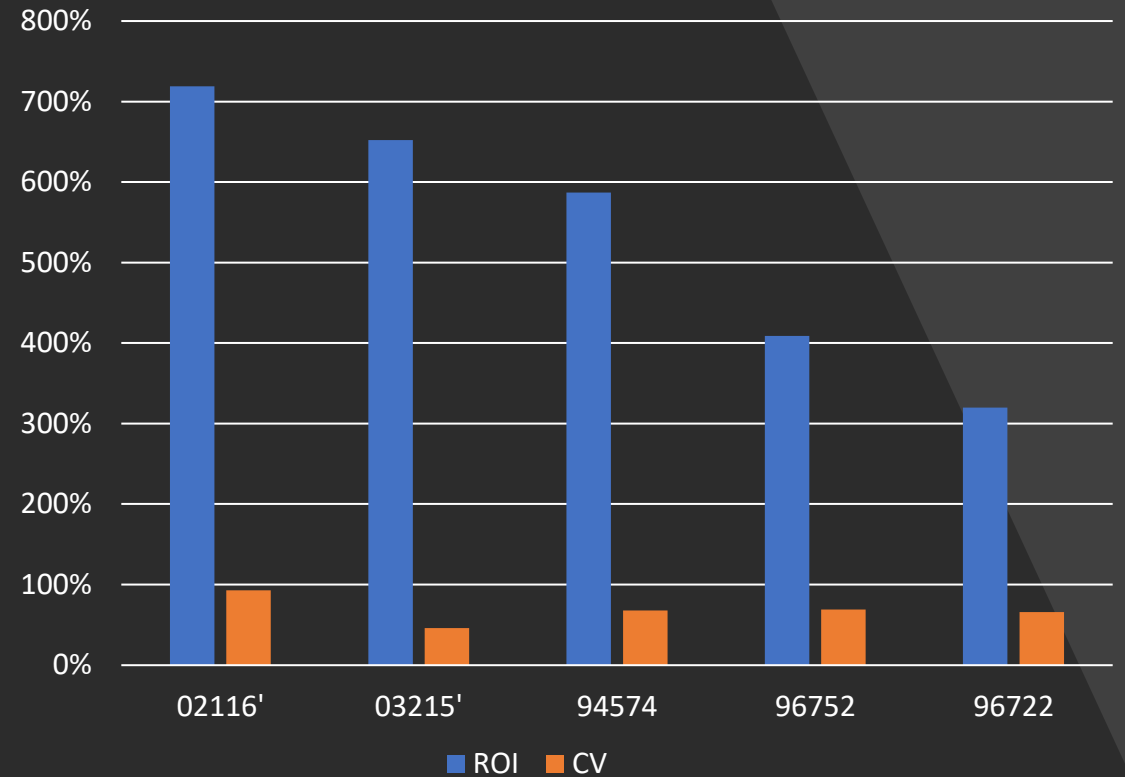
- Median price data dating back to 1996 for every zip code in USA
- Focus is on short and long term time horizon
- Coefficient of variance used to measure risk

# Top Performing Zip Codes

## Strongest 3 Year ROI by Zip Code



## Strongest 10 Year ROI by Zip Code

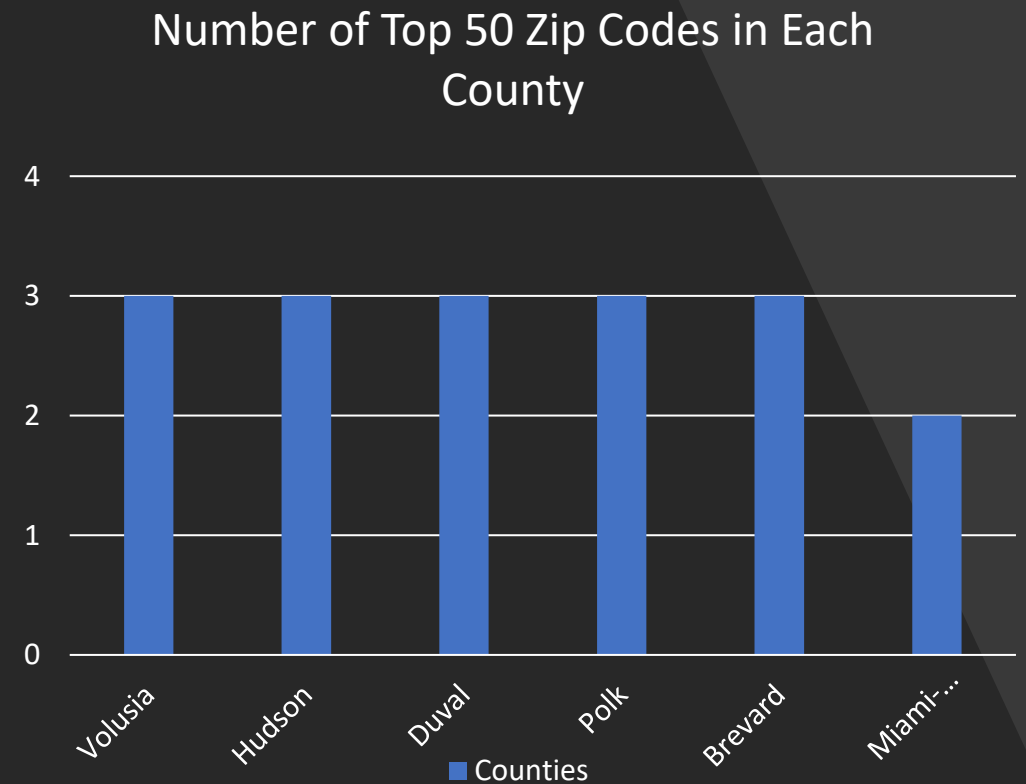


# Next Steps

- Top zip codes are spread out without much pattern
- Top 50 zip codes to invest in are analyzed to look for patterns
- Counties with most top 50 performing zip codes are recommended for consistency.

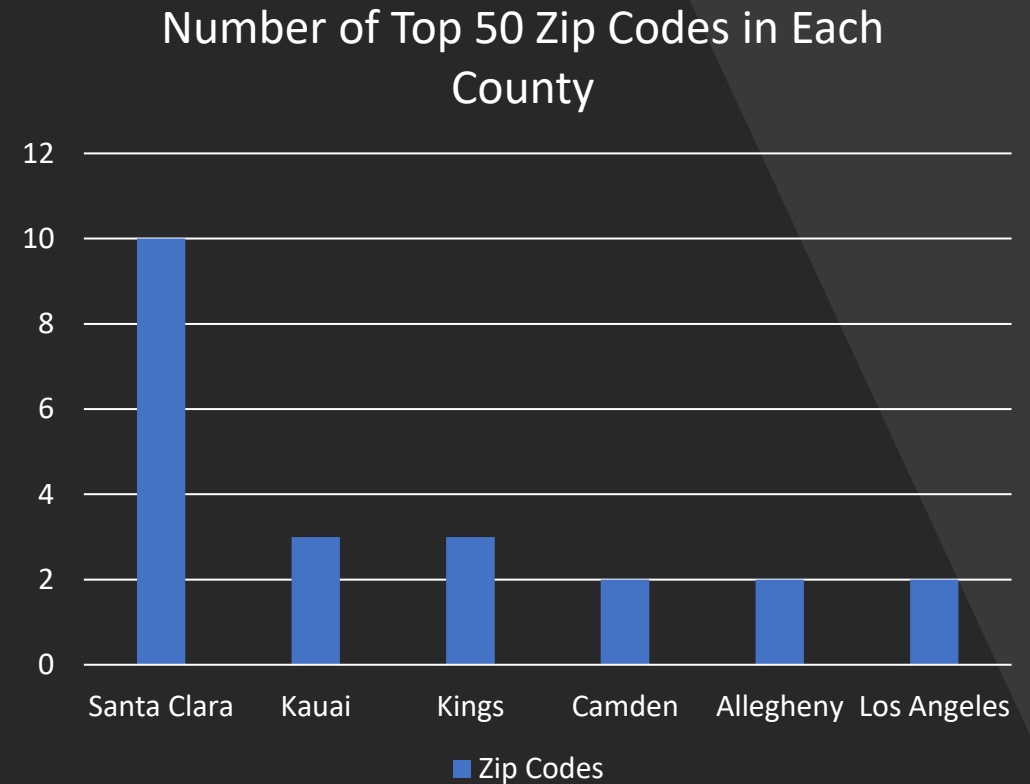
# Top Short Investing Areas

- No county has more than three zip codes in the top 50
- 5/6 counties with the most top performing zip codes are in the state of FL
- Average Florida three-year ROI is 36.2% compared to 20.8% nationwide average.



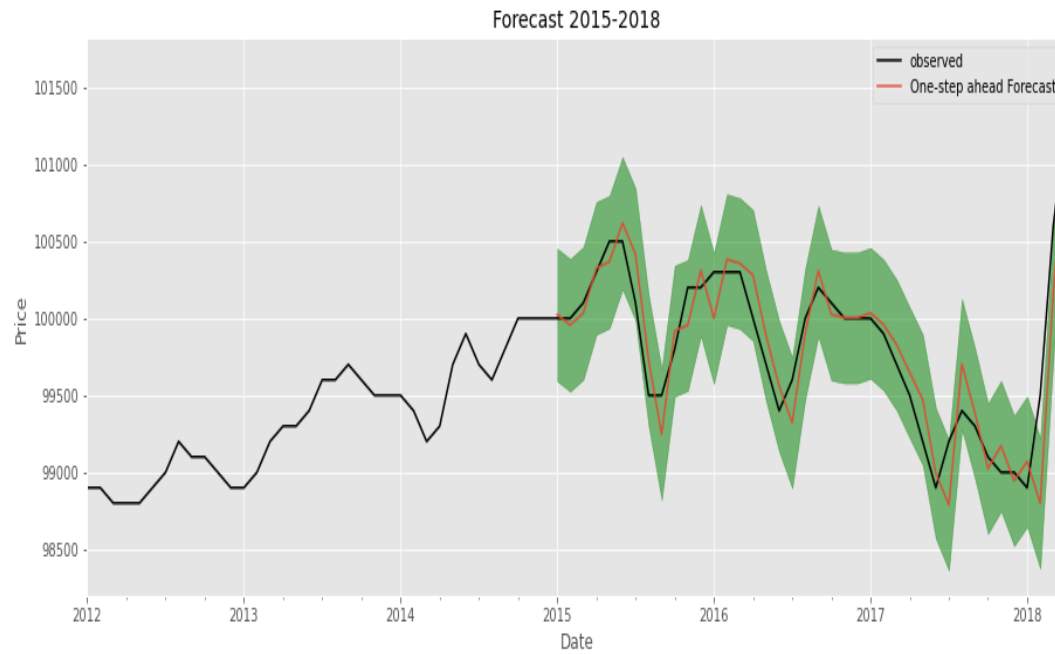
# Long Term Investing Performance

- Santa Clara has a whopping ten zip codes in the top 50, much more entries than any other county.
- 10-year ROI in Santa Clara is 88.1% as compared to 13.25% nationwide average

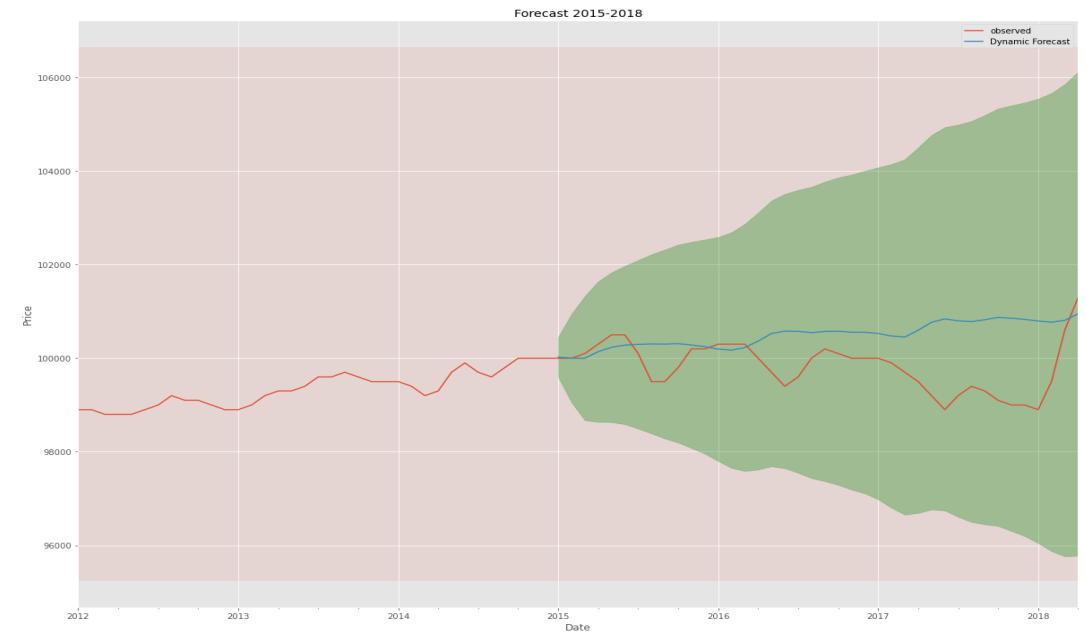


# Non-Dynamic and Dynamic Forecasts

## Non-Dynamic Forecast RMSE of \$214



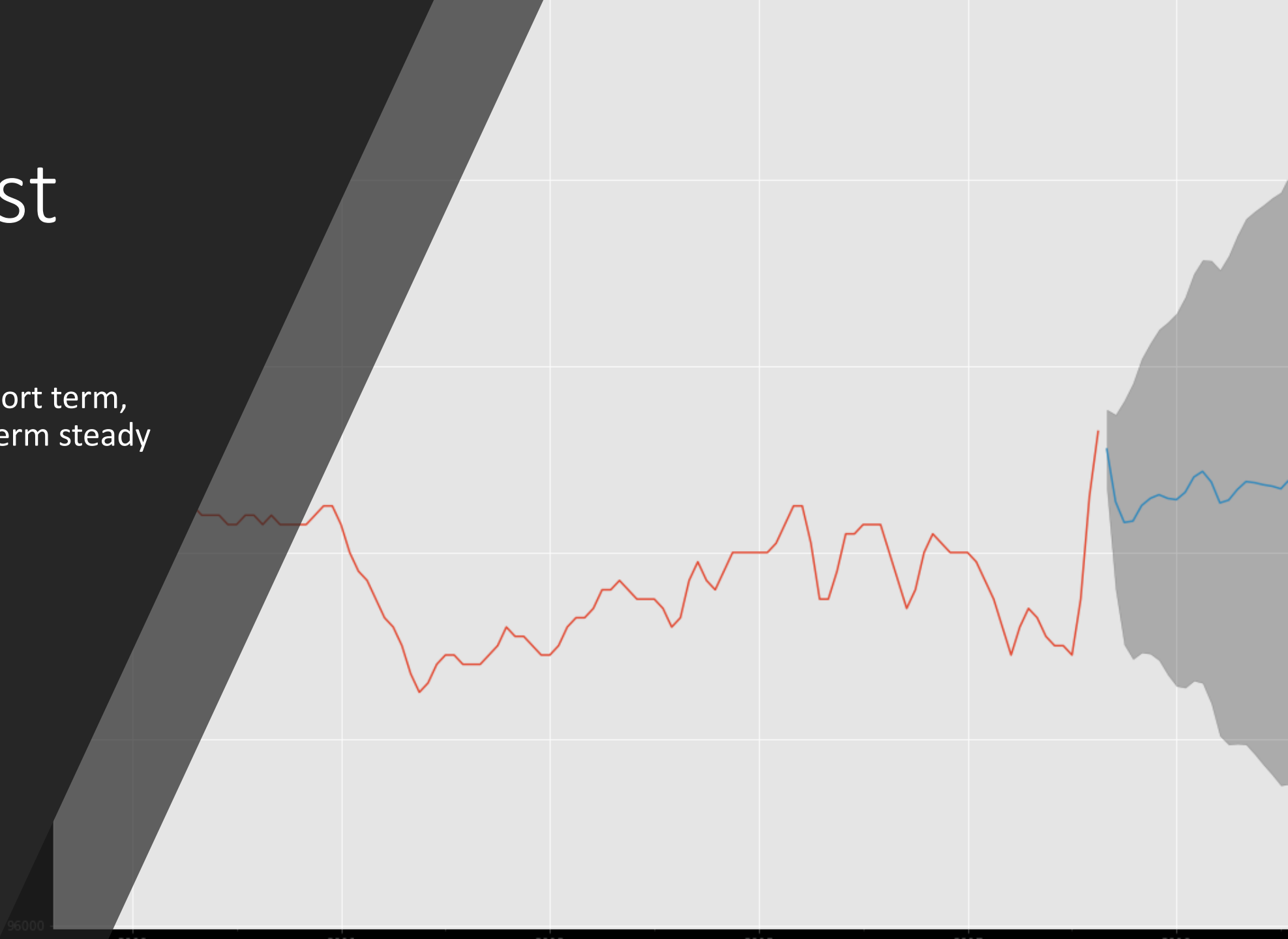
## Dynamic Forecast RMSE of \$961





# Forecast Model

Slight dip in the short term,  
followed by long term steady  
growth.



# Conclusion

- Short term investing we recommend the state of Florida
  - Florida has almost double the ROI compared to the national average
- Long term investing we recommend Santa Clara County
  - Santa Clara has appreciated almost 6.5 times as much as national average
- Our Dynamic Model has an RMSE of \$960
- Our Forecast Model predicts a short-term price drop followed by steady gains.

# Thank You

[github.com/jsherman918](https://github.com/jsherman918)