

# Predictions for Housing Investment

## Residential Projections by Zip Code



# Business Problem

## Where to buy property?

Our client is a real estate holding company looking to purchase homes as investments. Which zip-codes will yield the highest returns?



**Value Metric**

Return on Investment (ROI)



**Time Horizon**

5 Year Investments



**Risk Tolerance**

Low

# The Market

The US Real Estate market is large, with 1.12m housing units for sale in 2019. Our goal is to find the best zip codes to invest in in order to **maximize ROI**.

3.6%

Average Increase in Value  
- Single Family Home

13.1%

Average Increase in Value -  
Top Metro Area

383K

Average Sale Price

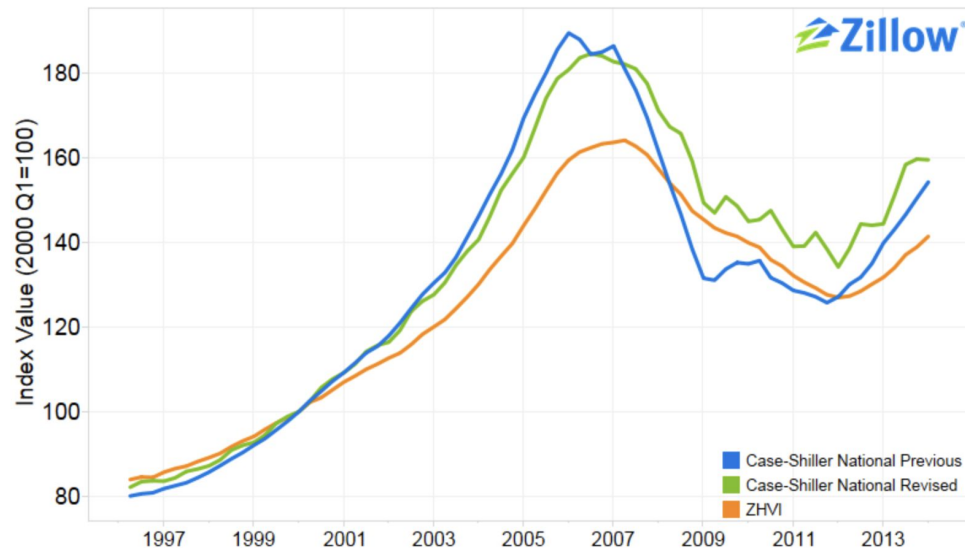


Recessions Common

# Data

- Zillow Home Value Index (ZHVI)
- 1996-2020
- 30,000 observations
- 73% of zip codes in the US
- Datatypes: int, float, object and 0

Case-Shiller and ZHVI



# Limitations

- Model is not perfect
- Non-Stationarity
- External factors not considered



# Method of Determining Best Zip Codes



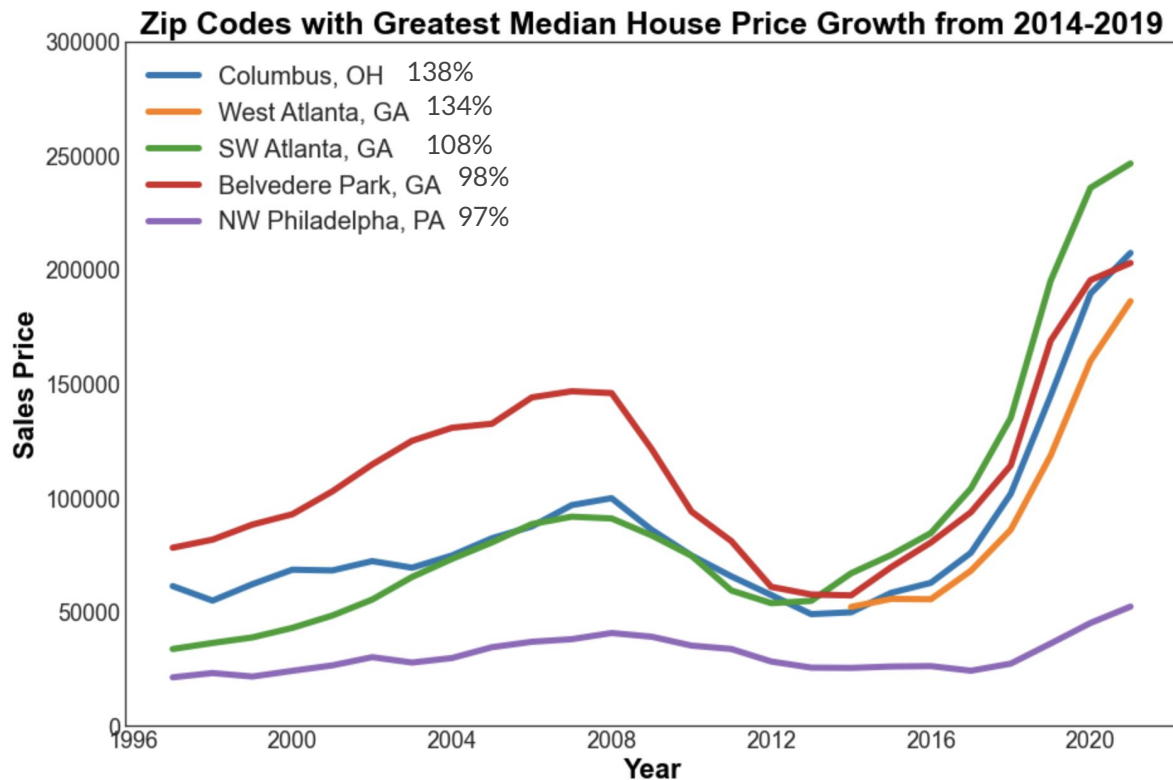
1. 3-year Growth
2. 24-year Growth
3. Recession Growth
4. Regional Growth



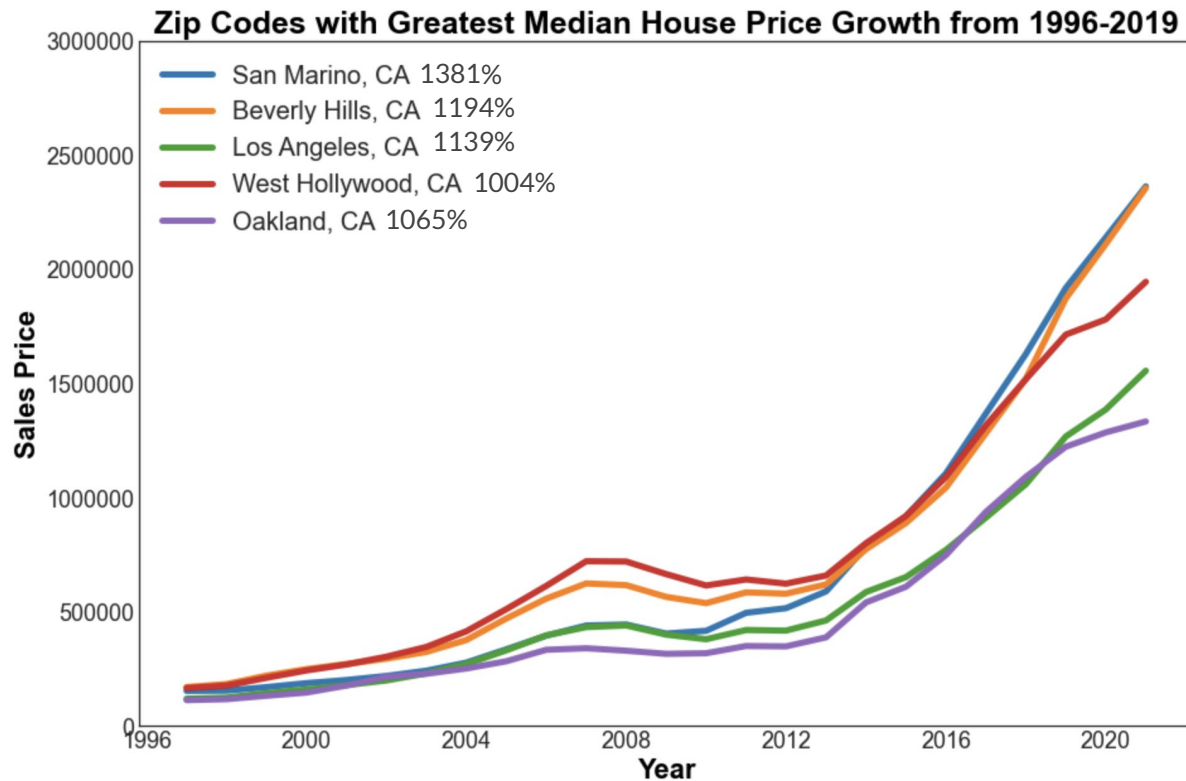
*conclusions*



# 3-Year Growth



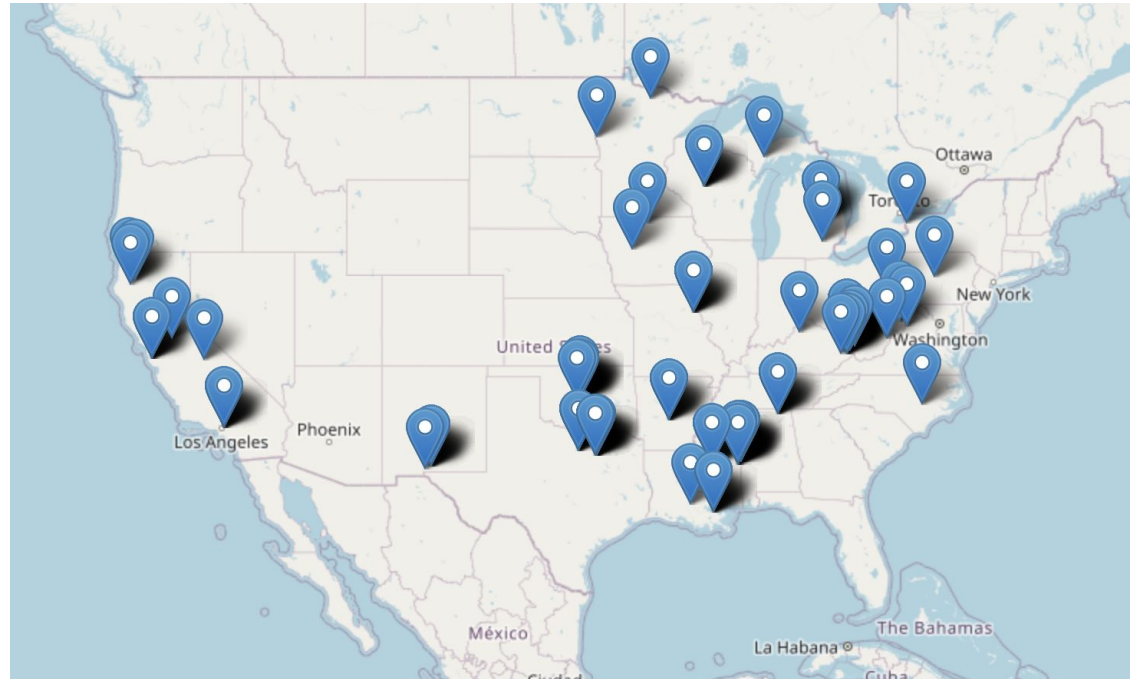
# 24-Year Growth



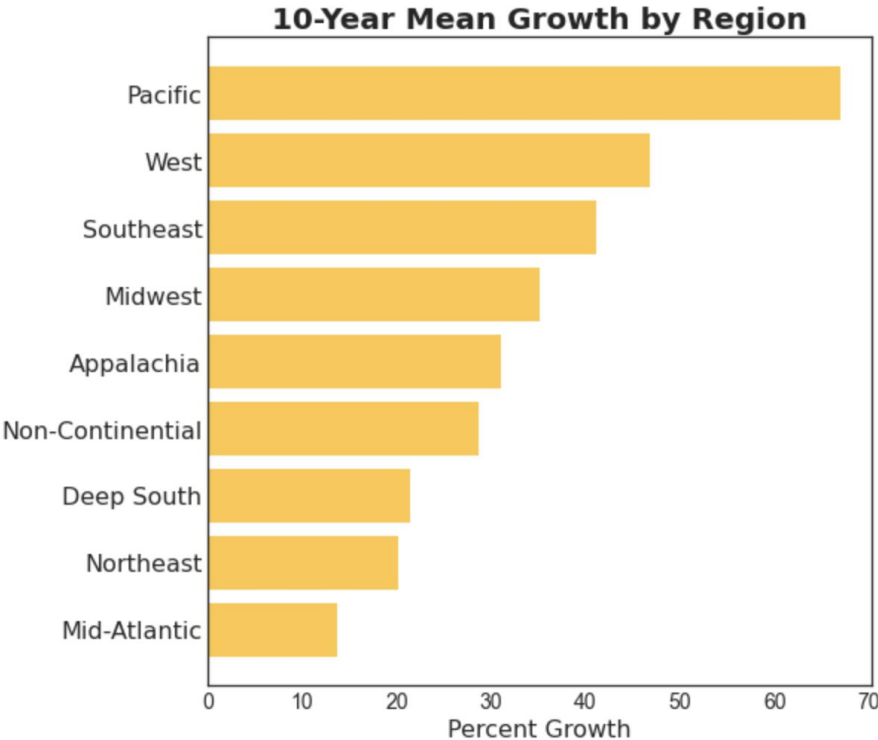


# Growth During Recession

*45 zip codes had  
15% or greater  
growth between  
2008-2009*



# Growth Since Recession



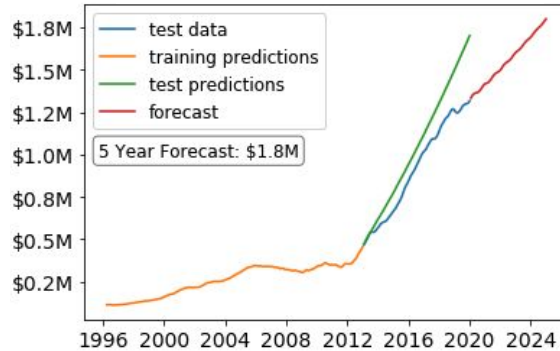
# Recommended Zip Codes

*All had 24-year growth over  
1000%*

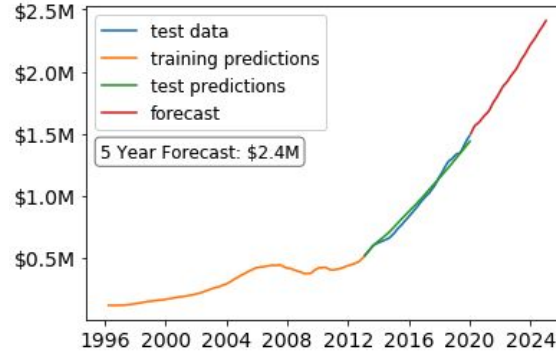


# Top Zipcodes - All Time - Predictions (1)

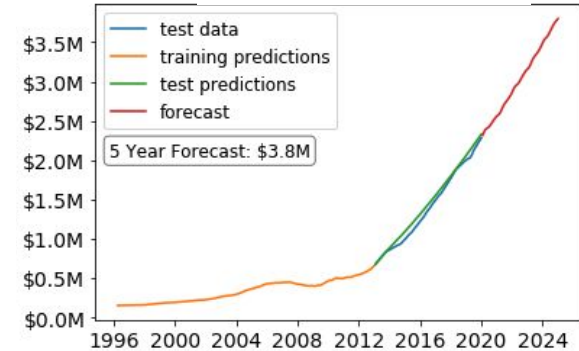
## Piedmont, CA



## Los Angeles, CA

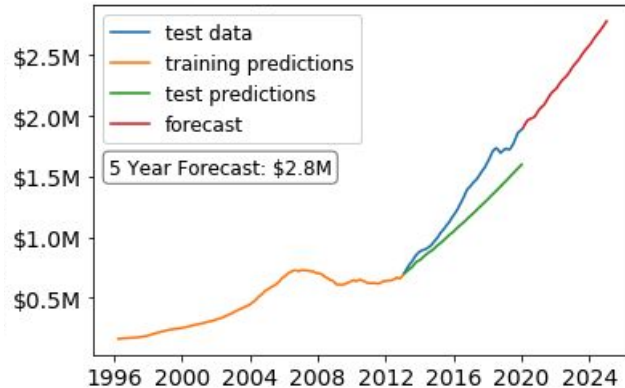


## San Marino, CA

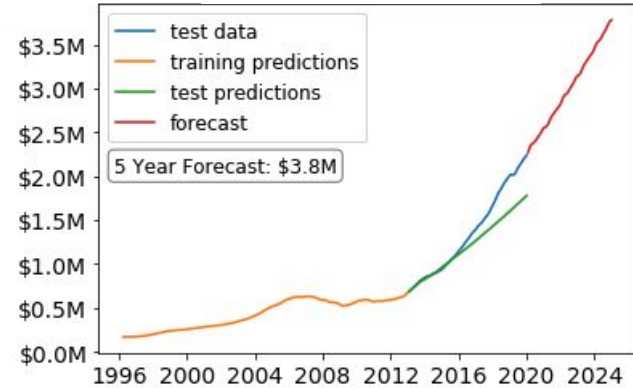


# Top Zipcodes - All Time - Predictions (2)

## West Hollywood



## Beverly Grove



# Future Improvements

- Use more advanced models
- Model other zipcodes



# Contact Info



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# Questions?

