

# Forecasting Real Estate Prices

Using Time Series Analysis to Predict  
Future Values

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# Overview

- Predict future real estate values of zip codes in San Jose, CA
- Highest 3 year ROI
- Performance of SARIMAX and Prophet models
- Highest performing model to forecast future real estate values

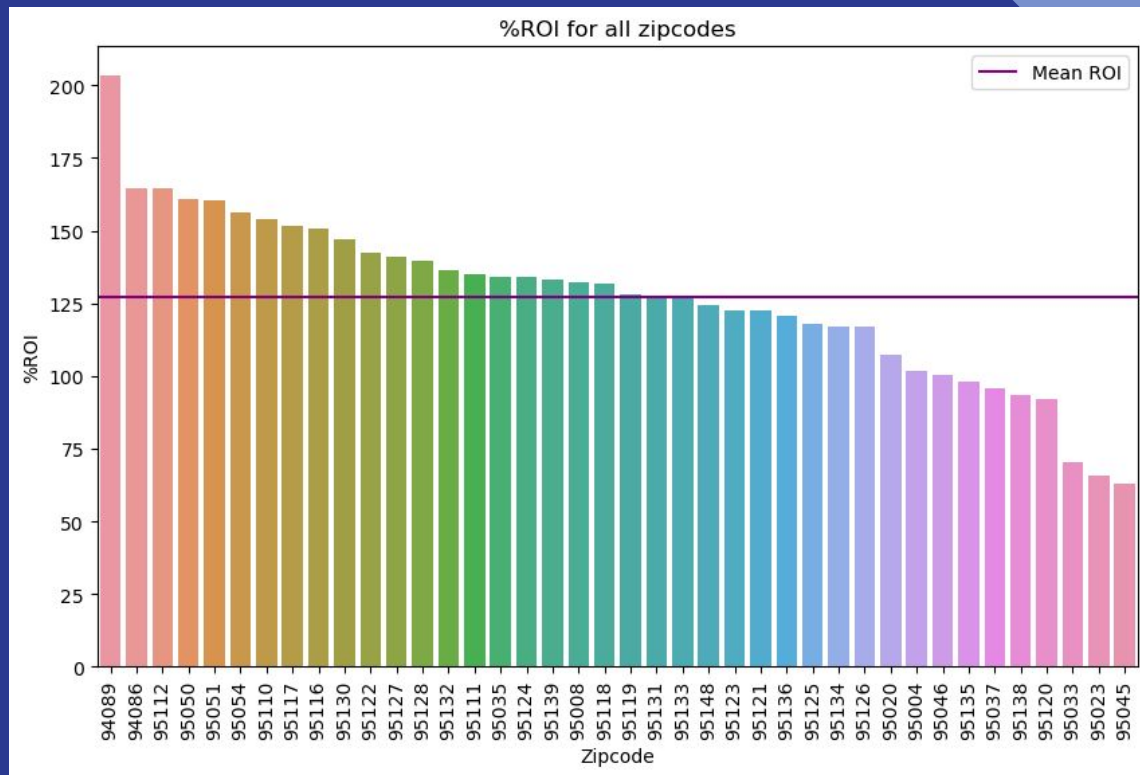


# Business Understanding

- Invest in real estate in the San Jose area.
- Location of many tech startups
- 3 year investments
- Mindful of budget- < \$2 million.

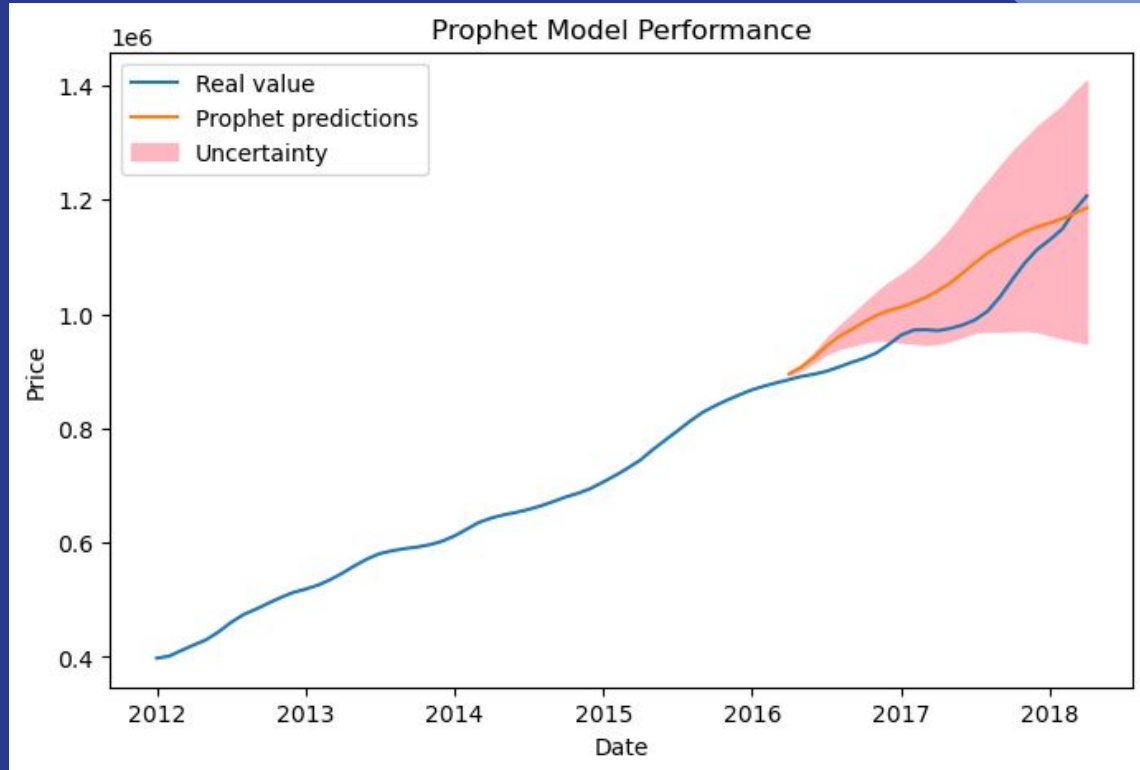
# Data

- 40 zipcodes
- April 1996- April 2018.
- 2012 onwards was used for modeling.
- Average price April 2018 \$1.16 million
- Mean ROI 127%.



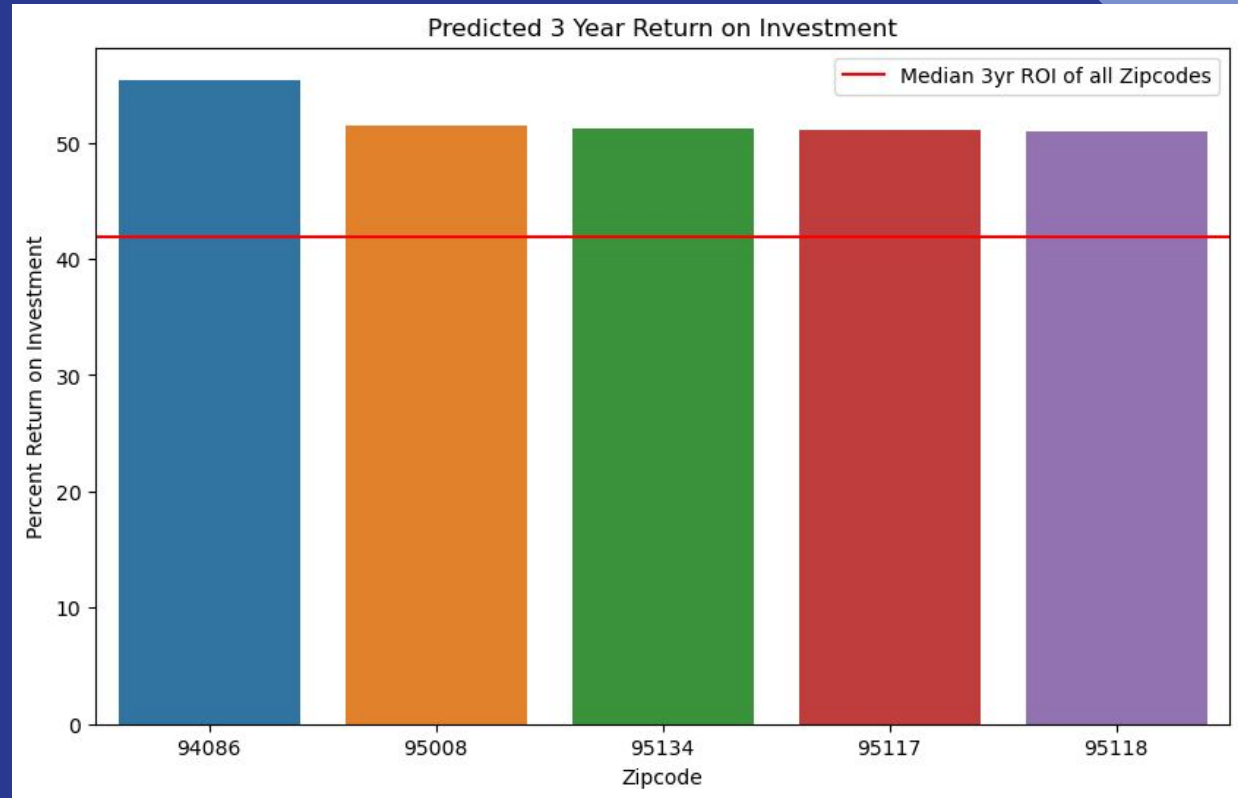
# Modeling

- Zipcode 94089 used to explore models.
- Prophet model performed best



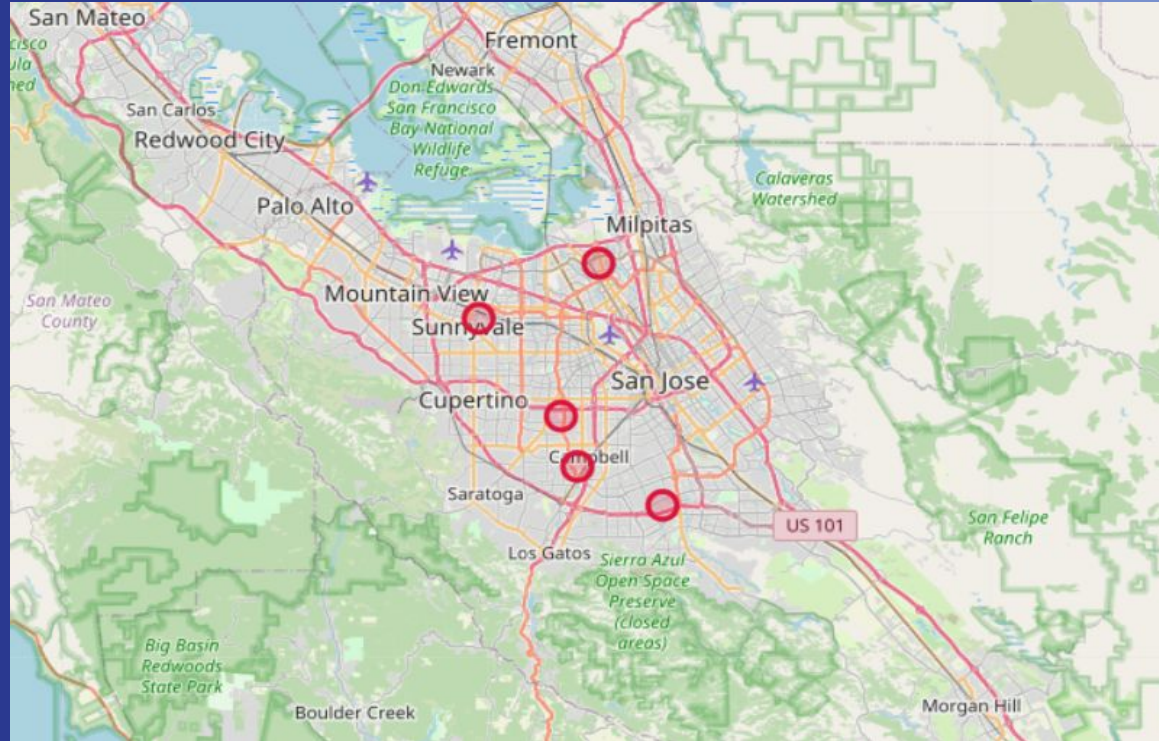
# Top 5 zipcodes

- Forecasted 3 year ROI between 51% and 55%
- Mean of 40% and median of 42% for all zipcodes



# Conclusions

- Mean 2018 price: \$1.5 million
- 29,000-49,000 population
- 6,500-18,500 households



# Next Steps and Limitations

- Economic recessions
- Other factors that contribute to housing demand
- Most recent observations from April 2018



# Thank You!

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