

# Where Should You Invest in Real Estate?

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# Overview

Data

Model

Validation

Predictions

## Business Understanding:

Identify/predict real estate trends for investment opportunities.



# Data

## Zillow

- Measure: # of units sold
- Time: 2008-2022
- 95 metropolitan areas

Increasing sales → Better investment



# Goals

Identify growing real estate markets.

Early detection of trends is a good way to maximize profit.



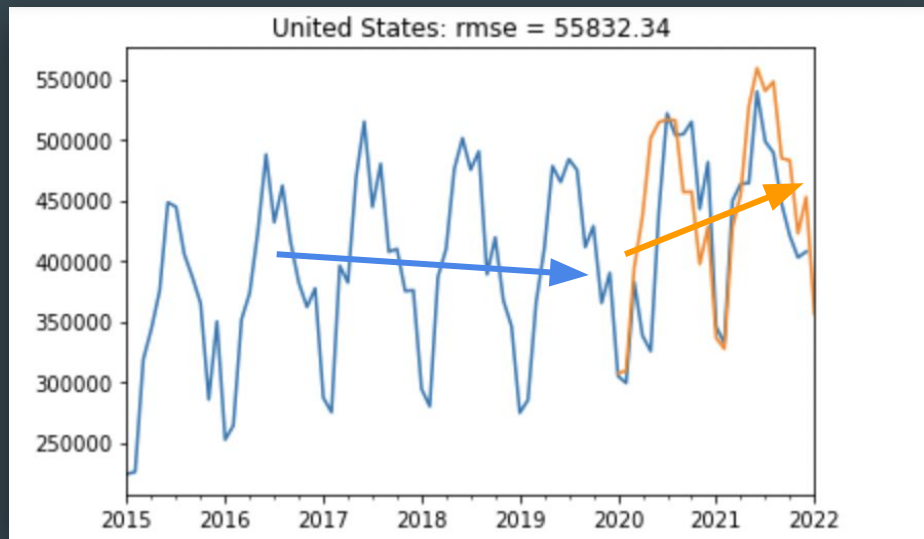
# Modeling

Determined best parameters

- Minimized Error
- Maximized Likelihood Estimate

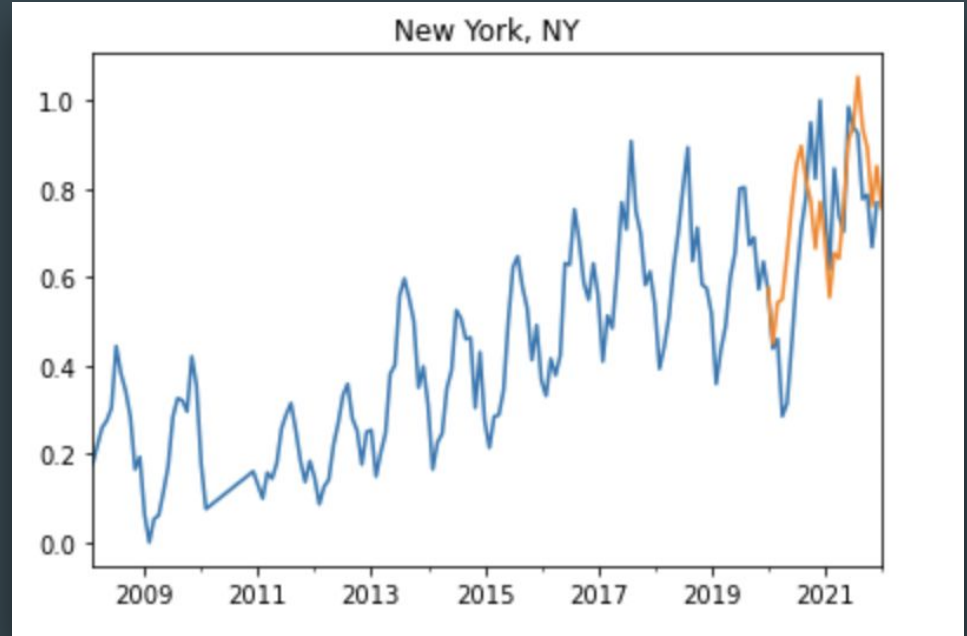
Validated Data

- Average Percent Error
- Visualizing Forecasts



# Analysis

Average  
Error = 50%

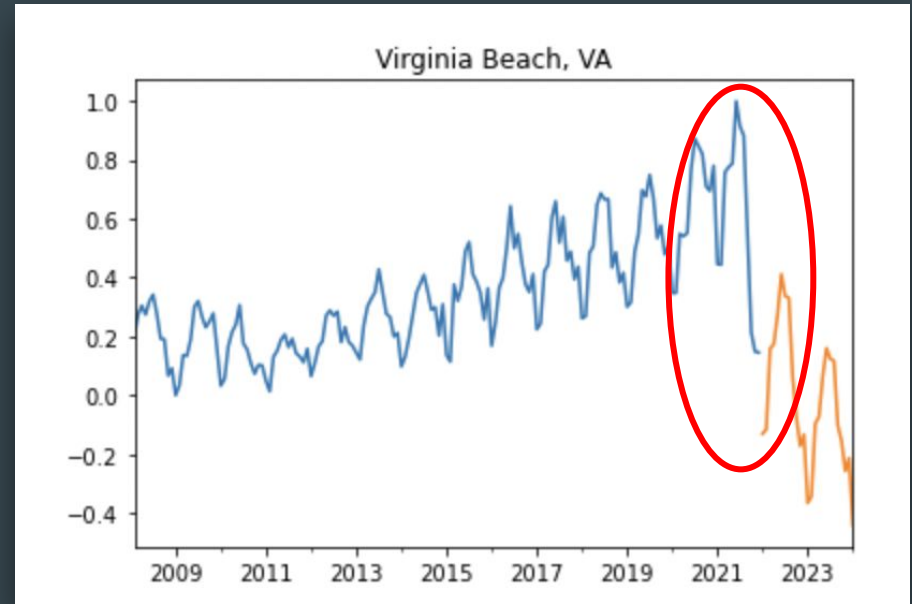




# Results/Limitations

Model is sensitive to recent changes in data.

External factors (ie. a pandemic) aren't predicted.



\*too sensitive

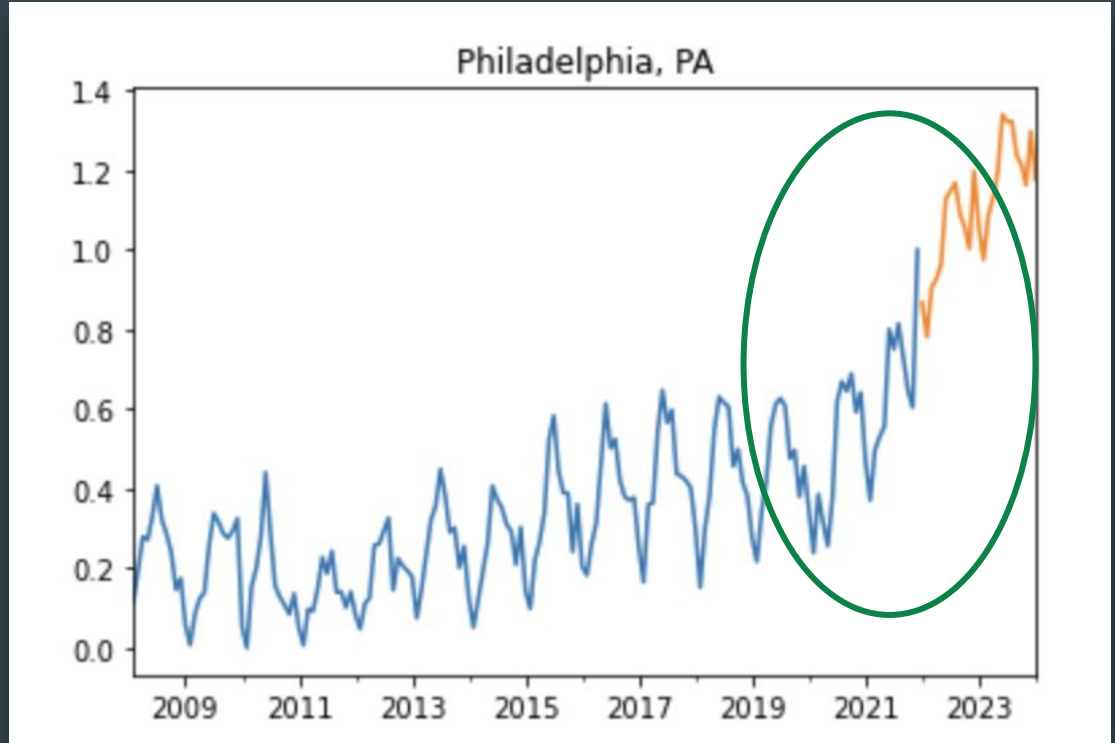
# Conclusion

## Trending Markets:

- Philadelphia, PA
- Buffalo, NY
- Dayton, OH

## Stable Markets:

- Los Angeles, CA
- Chicago, IL
- United States



\*Trend Identified



# Future Improvements

Include pricing data.

Make prediction quantifiable.

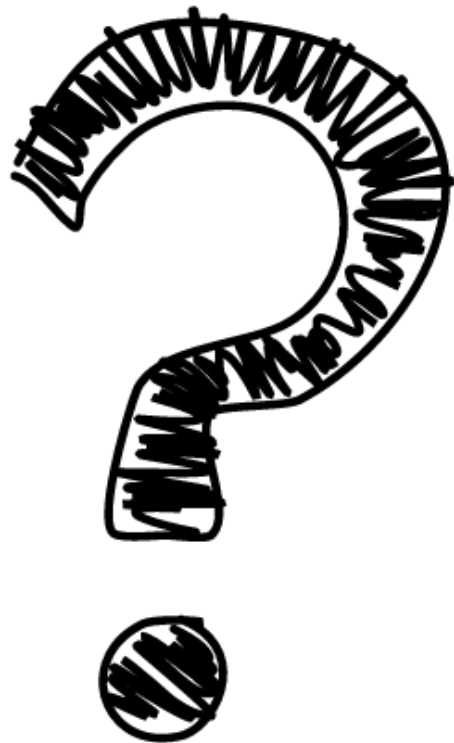
Increase model resilience.

Change forecasting window.

Handling outliers.



# Questions



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