# Forecasting Real Estate Prices

Where you should invest and why.



#### **Meet the Team**

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## Agenda

01

Business Problem 02

Data
Understanding
/Preparation

03

Modeling

04

Results/
Recommenda
tions

## Business Understanding



Top 5 Cities

for real estate investors.



Highest forecasted return



Forecasting for the upcoming 10 years

## Data & Preparation

Zillow Housing Data

Monthly Median Housing Prices

1996 to 2018

Filtered by 10 cities

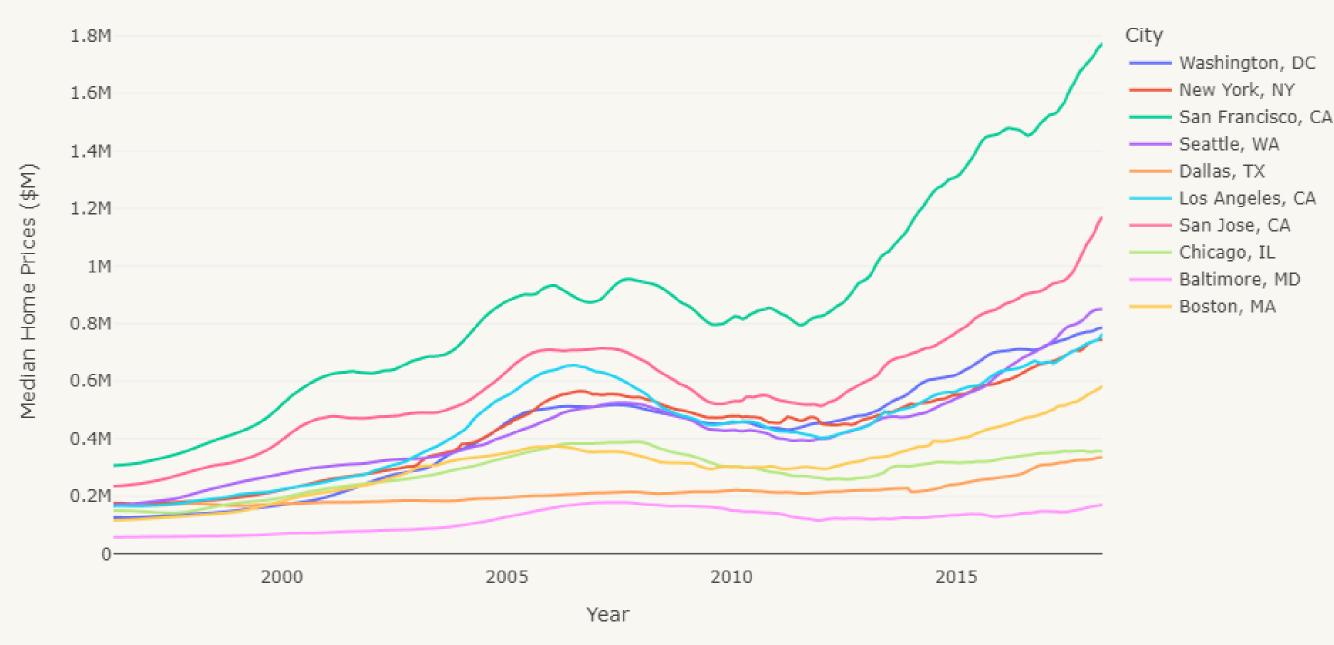
Top 10 cities for Tech jobs

Built Models based off of the 10 cities.

## Monthly Growth

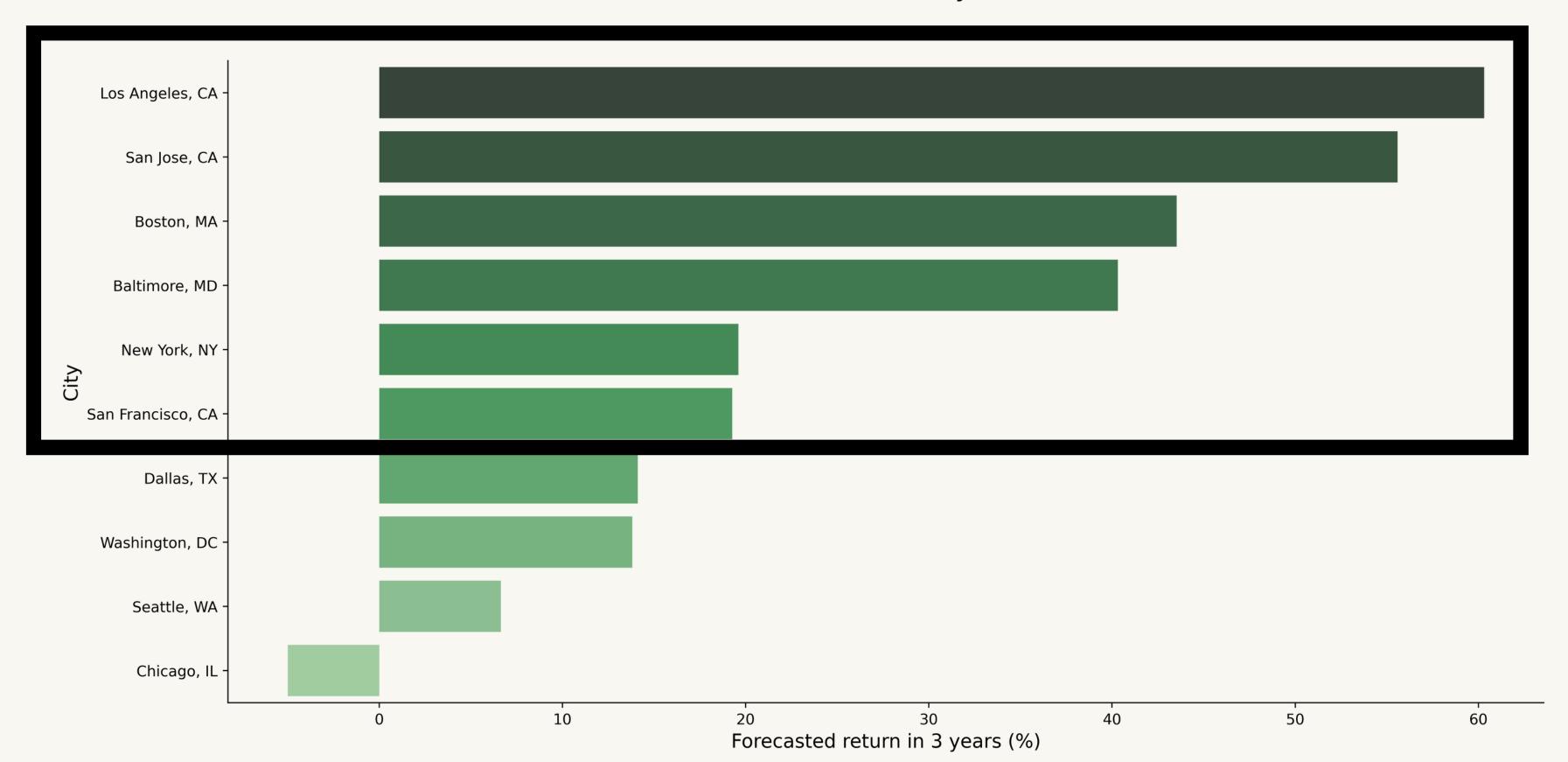
Home price trend in from 1996 - 2018.





## Forecasted Return

Forecasted Return in 3 years (%)



# Median Household Income vs Median Home Price (\$)

Median Household Income vs. Median Home Price (\$USD) in the United States



## TOP 5 CITIES

1 LOS ANGELES, CA

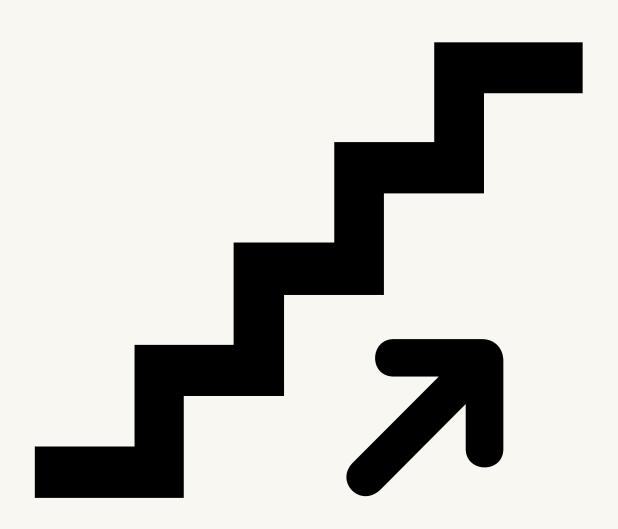
2 SAN JOSE, CA

BOSTON, MA

4 BALTIMORE, MD

5 NEW YORK, NY

## Next Steps



Collect Data for Covid 19 period

Add Exogenous Variables

- School Ratings, Income of residents, etc

Forecast with Long Short Term Memory networks LSTM

# Thank you!

Any Questions?

#### **TALK TO US**

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### - APPENDIX

Time Series Forecasting

ACF and PACF

10 ARIMA Models for each city

Explained Variance Root Mean Squared Error