

NYC Housing Market

Anubhav Jain

Understanding Your Goals

You are a risk averse investor, looking to make a sound investment in New York City.

In our predictions, we limited Error and Variability.



Description of Dataset

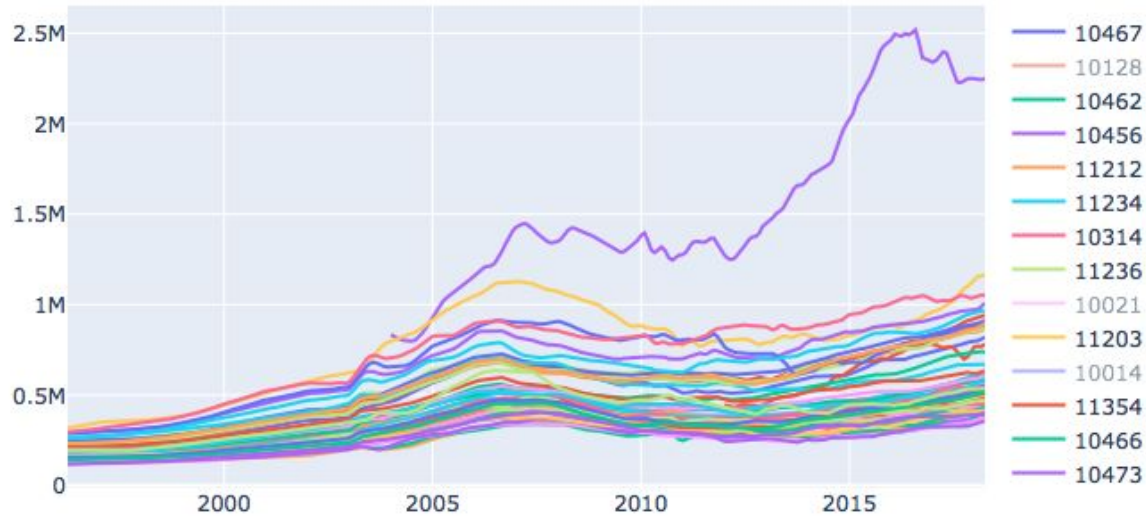
Description of NYC Dataset

- In our investment time series modeling, we have used gathered 68 Zip Codes throughout New York City
 - ◆ 12 different Zip Codes in the Bronx
 - ◆ 5 different Zip Codes in Brooklyn
 - ◆ 3 different Zip Codes in Manhattan
 - ◆ 36 different Zip Codes in Queens
 - ◆ 12 different Zip Codes in Staten Island
- Our model was trained only for the past 10 years (April 2008-Present)

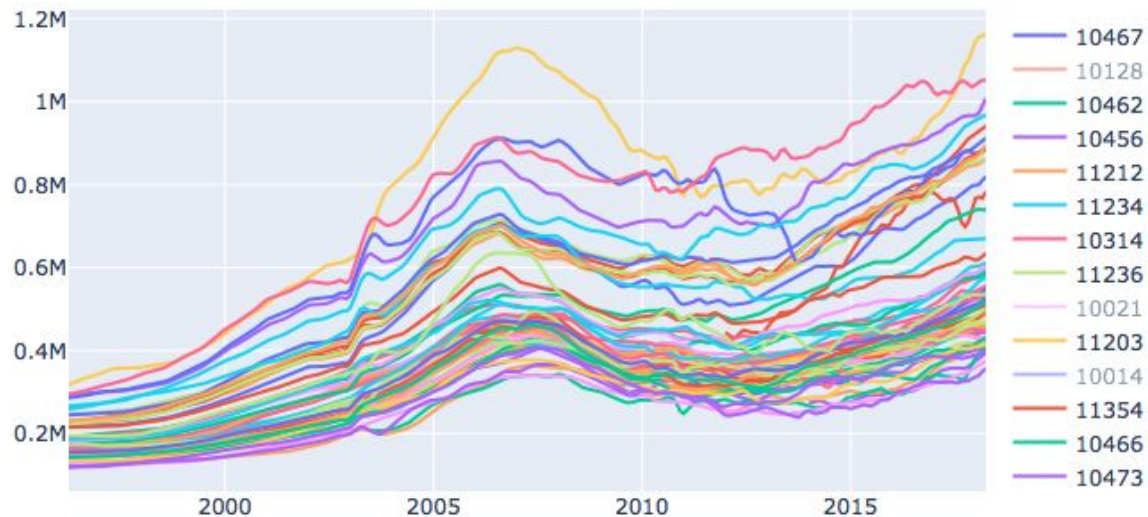
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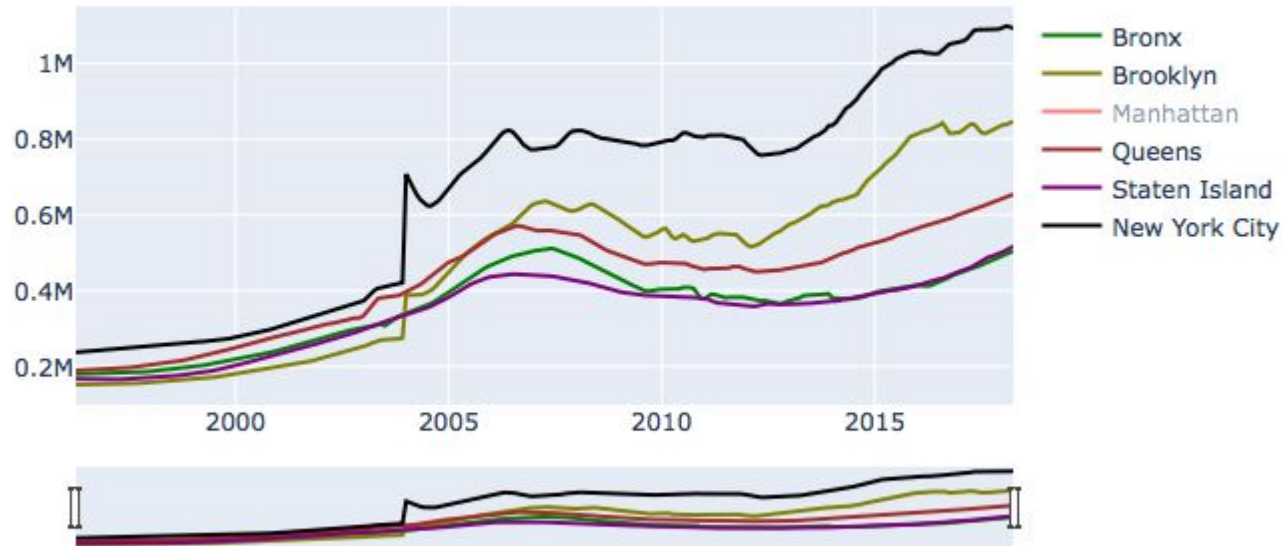


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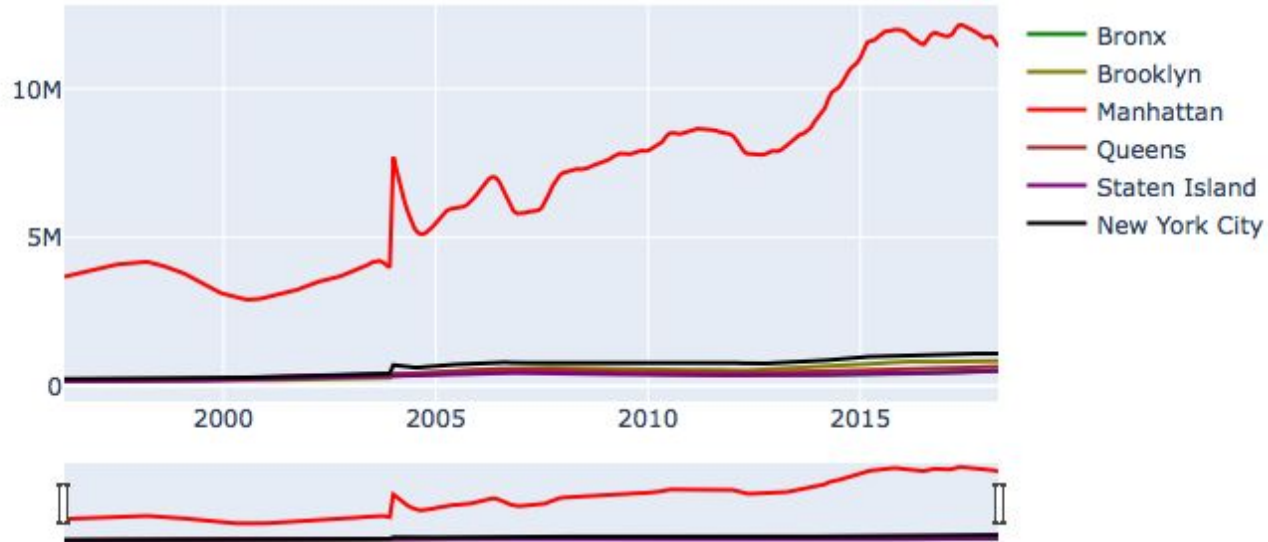
Home Value Index

New York City Home Value Index



Home Value Index

New York City Home Value Index



Rise of Luxury Apartments

Manhattan Home Value Index



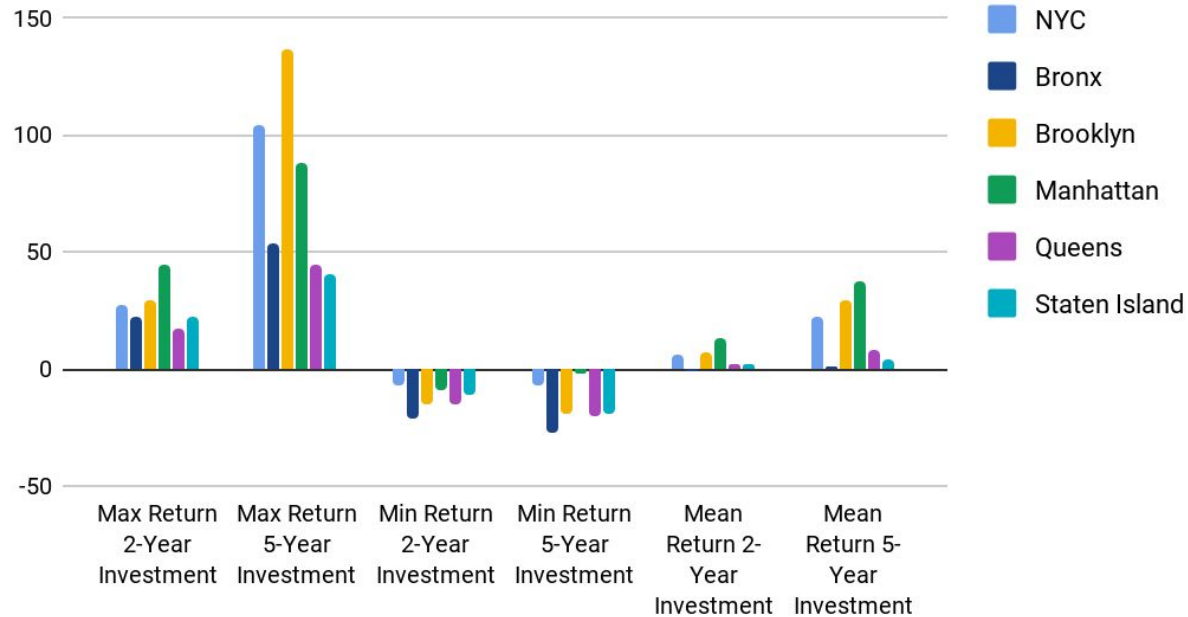
Brooklyn Home Value Index



Historical Return on Investment

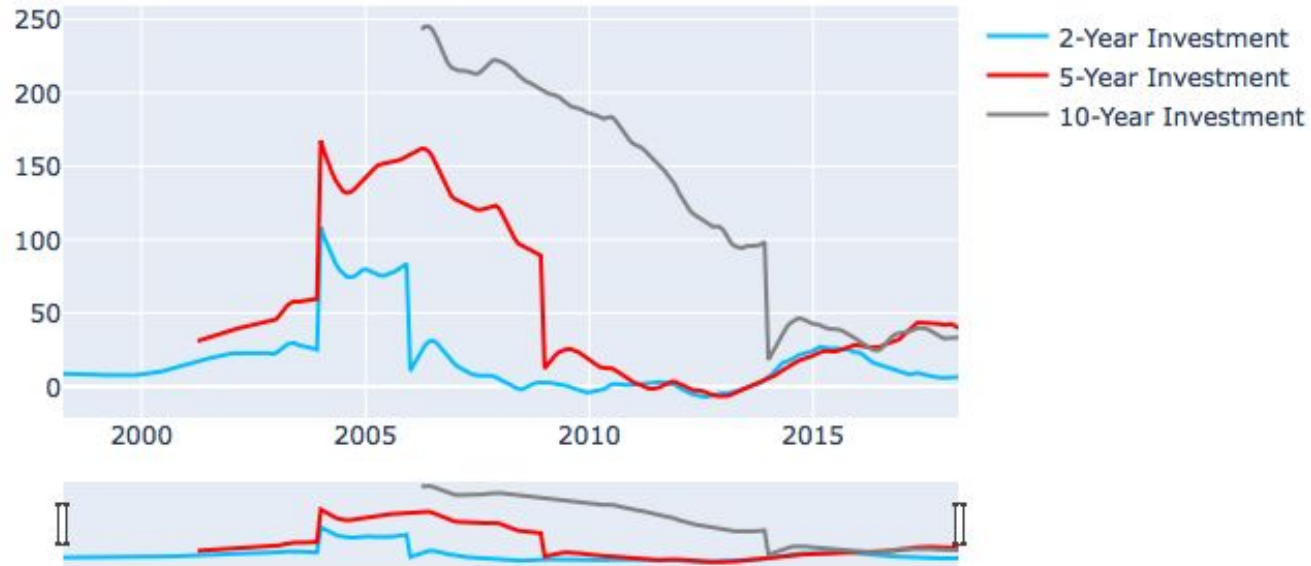
Historical Return on Investment

Historical Return on Investment



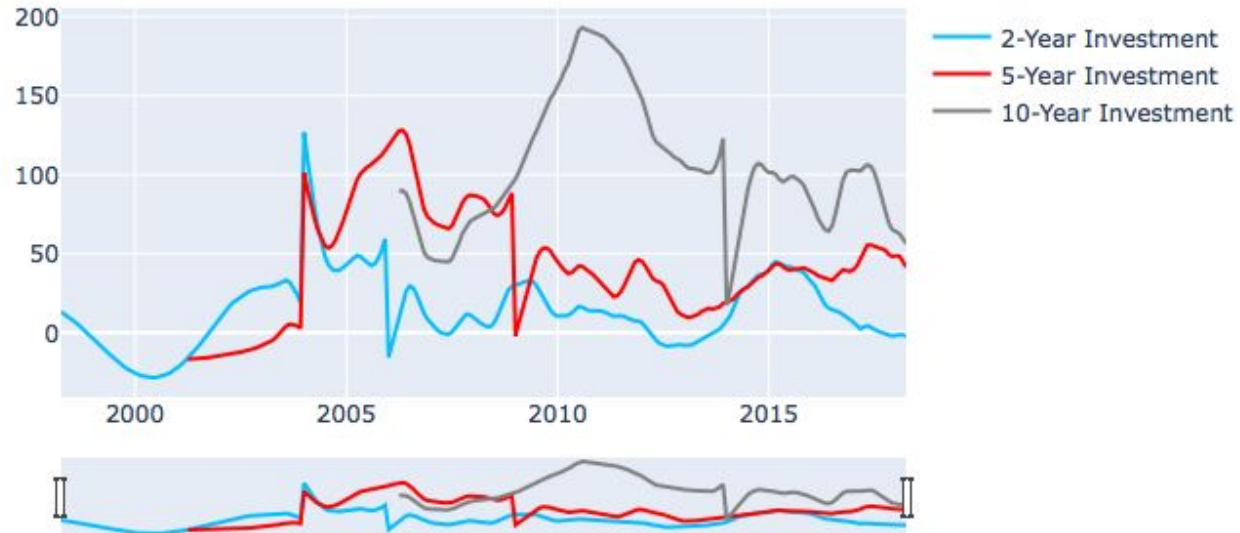
Historical Return on Investment

New York City Return on Investment



Historical Return on Investment

Manhattan Return on Investment



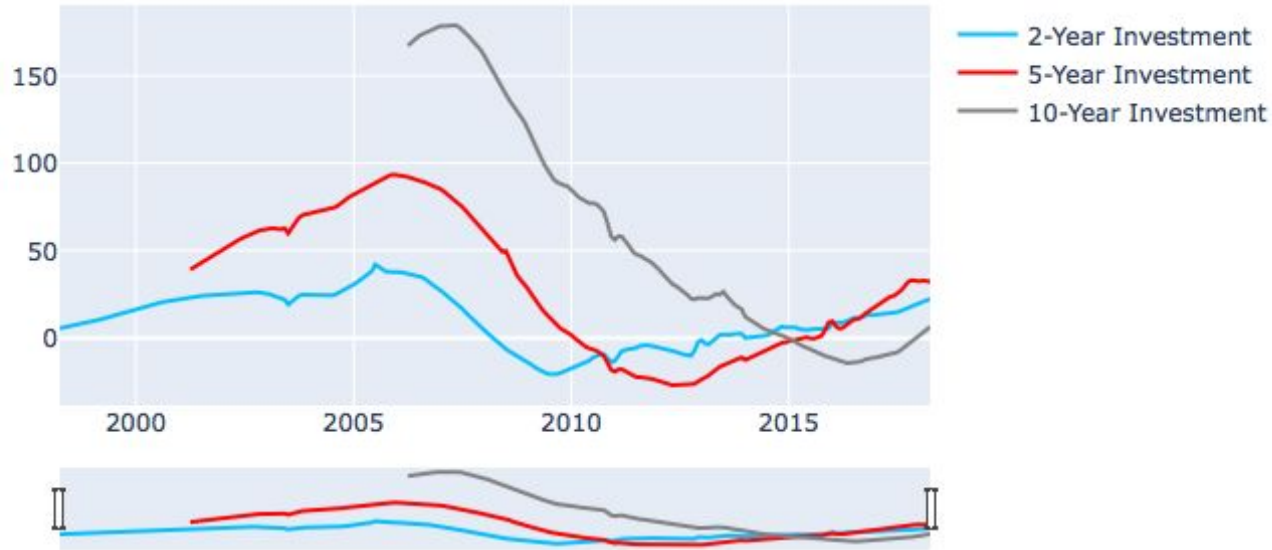
Historical Return on Investment

Brooklyn Return on Investment



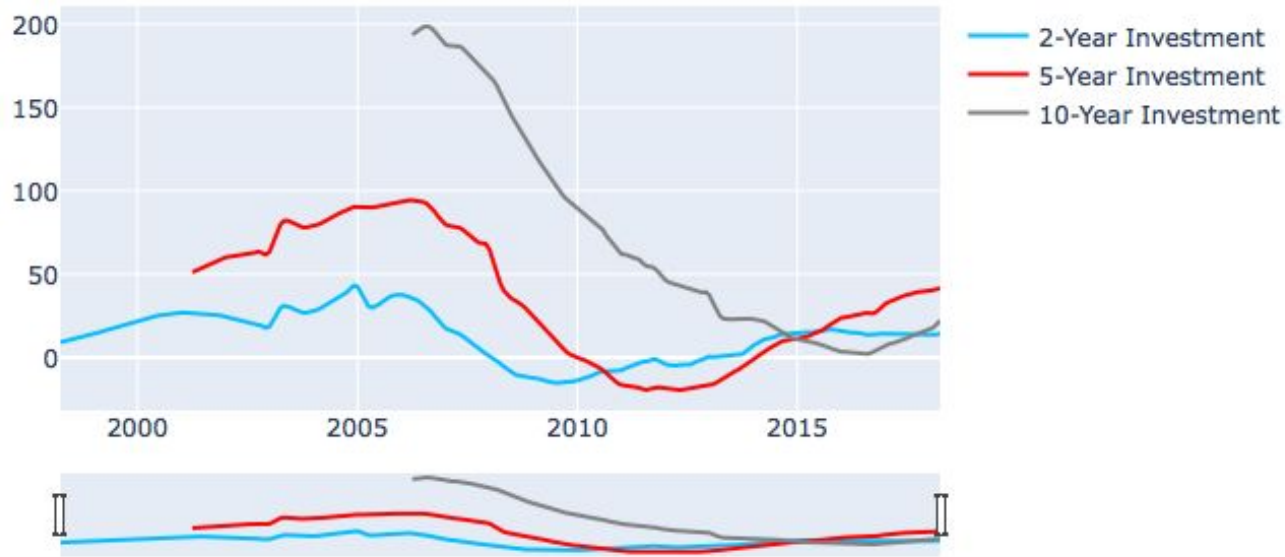
Historical Return on Investment

Bronx Return on Investment



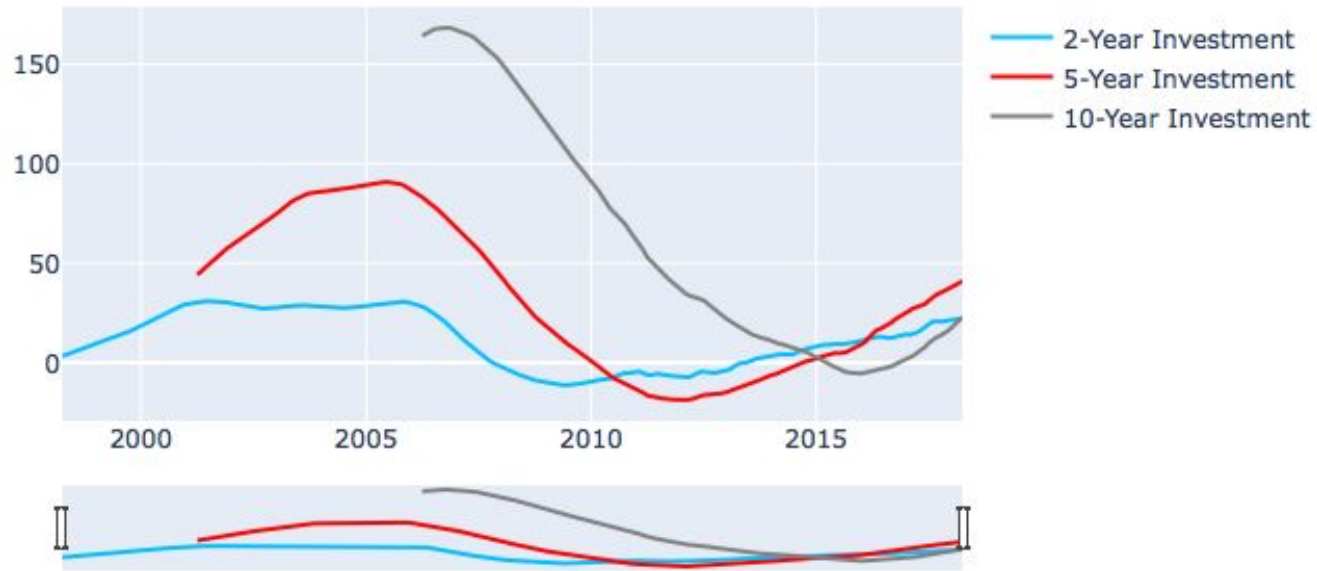
Historical Return on Investment

Queens Return on Investment



Historical Return on Investment

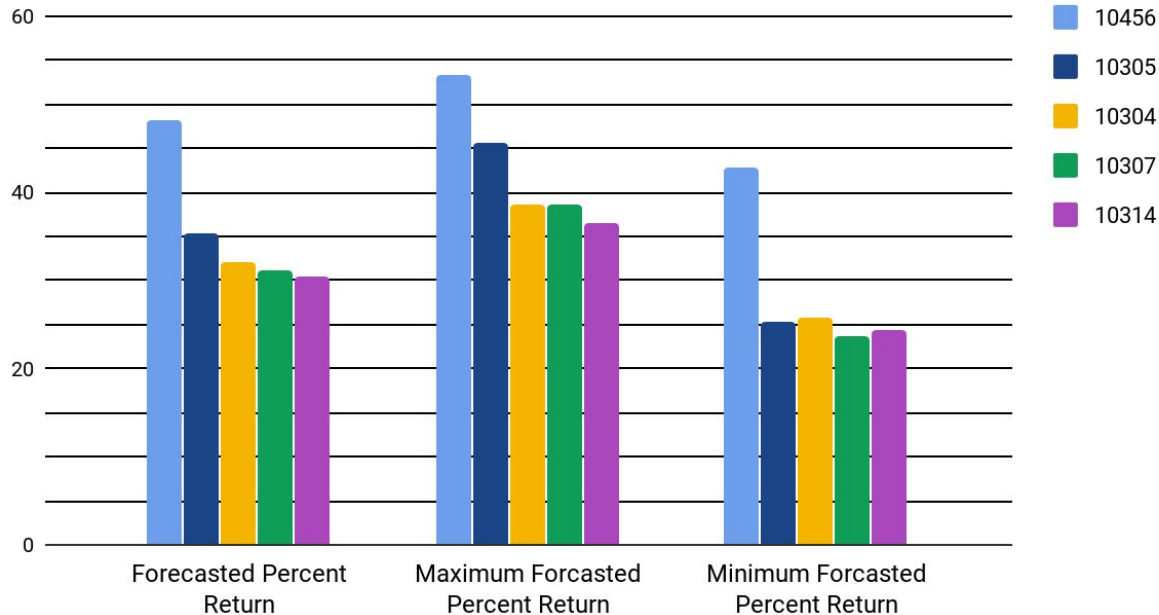
Staten Island Return on Investment



Findings

5 Best Zip Codes

2-Year Investment Forecast from 04/2018-04/2020



10456 - Bronx, NY

10305 - Richmond County, Staten Island, NY

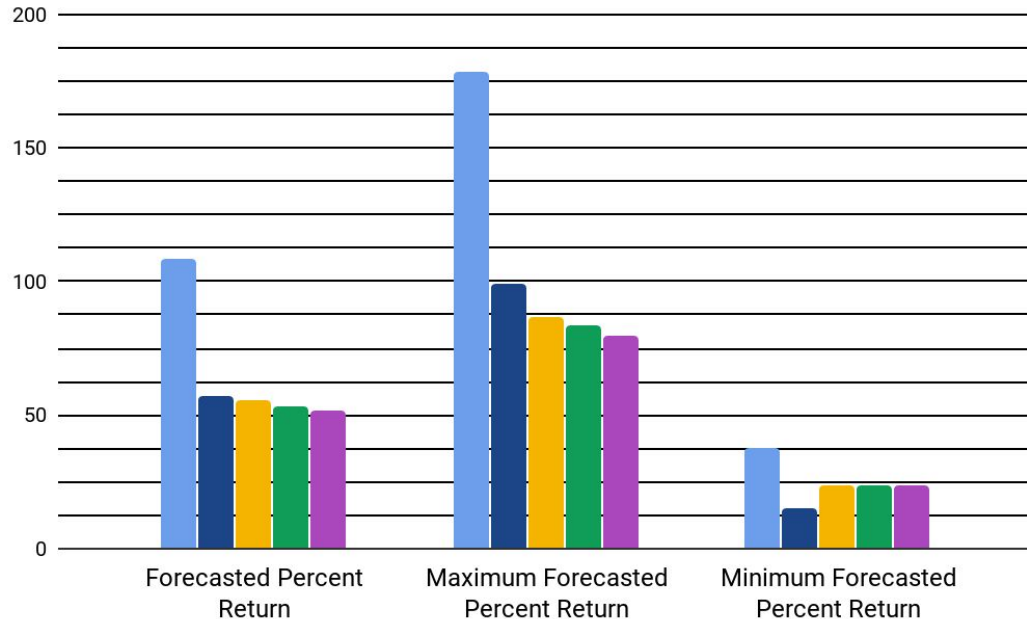
10304 - Richmond County, Staten Island, NY

10307 - Richmond County, Staten Island, NY

10314 - Richmond County, Staten Island, NY

5 Best Zip Codes

5-Year Investment Forecast From 04/2018-04/2023



10303

10303- Richmond County, Staten Island, NY

11364

11364 - Oakland Gardens, Queens, NY

11358

11358 - Murray Hill/Flushing, Queens, NY

10309

10309 - Richmond County, Staten Island, NY

10305

10305 - Richmond County, Staten Island, NY

Recommendations

We are looking for a secure, safe investment in NYC.

We notice that Mean Home Value in Manhattan has been decreasing, whereas most others have been increasing.

We also find that return on investment has been decreasing for Manhattan and Brooklyn.

We recommend to invest in the Richmond County Area of Staten Island over the next 2-5 years, and around Flushing, Queens over the next 2 years.

10456 in the Bronx looks as the most attractive investment yet the most risky.

Further Work

Keep in mind, our forecasts were solely based on past monthly home values. I would look to add more features to better predict housing prices in the future.

I would look to improve the model by understanding better the trends and seasonality of each zip code.

I would explore other time series models such as Facebook Prophet, or Vector Autoregression Moving-Average with Exogenous Regressors model.

Gathering more recent data so we can better reflect what is occurring in NYC today.

Thank You

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