



Real Estate Investment

BY MAHMOUD HOSNY

Project Statement:

Forecast the 5 Greatest ROI zip codes to
Invest in New York

Dataset provided by Zillow

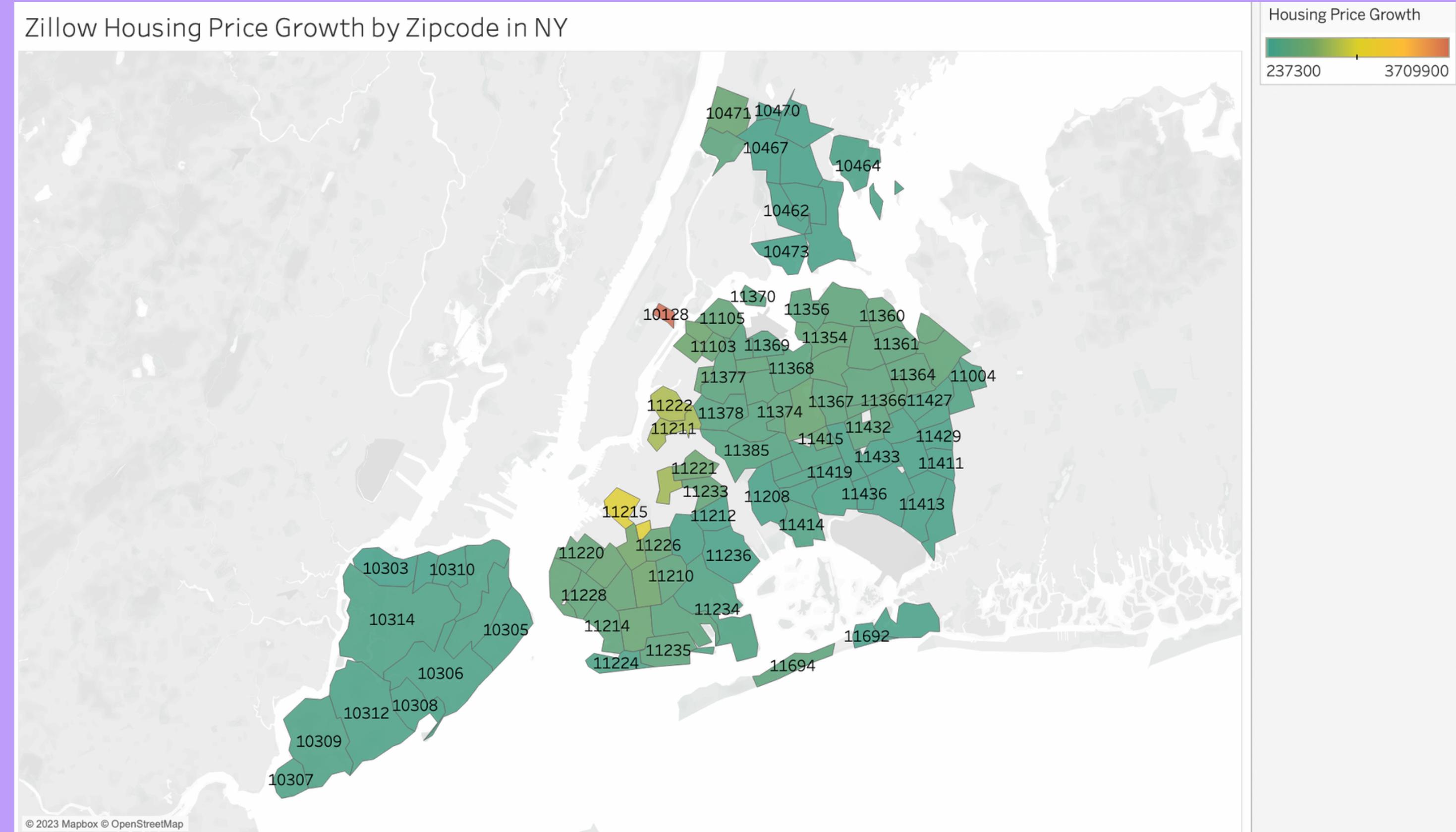
Median housing price per month
for each zip code from
April 1996 to April 2018



Which Zip Codes have the Greatest Return?



New York Zip Codes



Housing Price Growth = value of median homes in April 2018 - value of median homes in April 1996

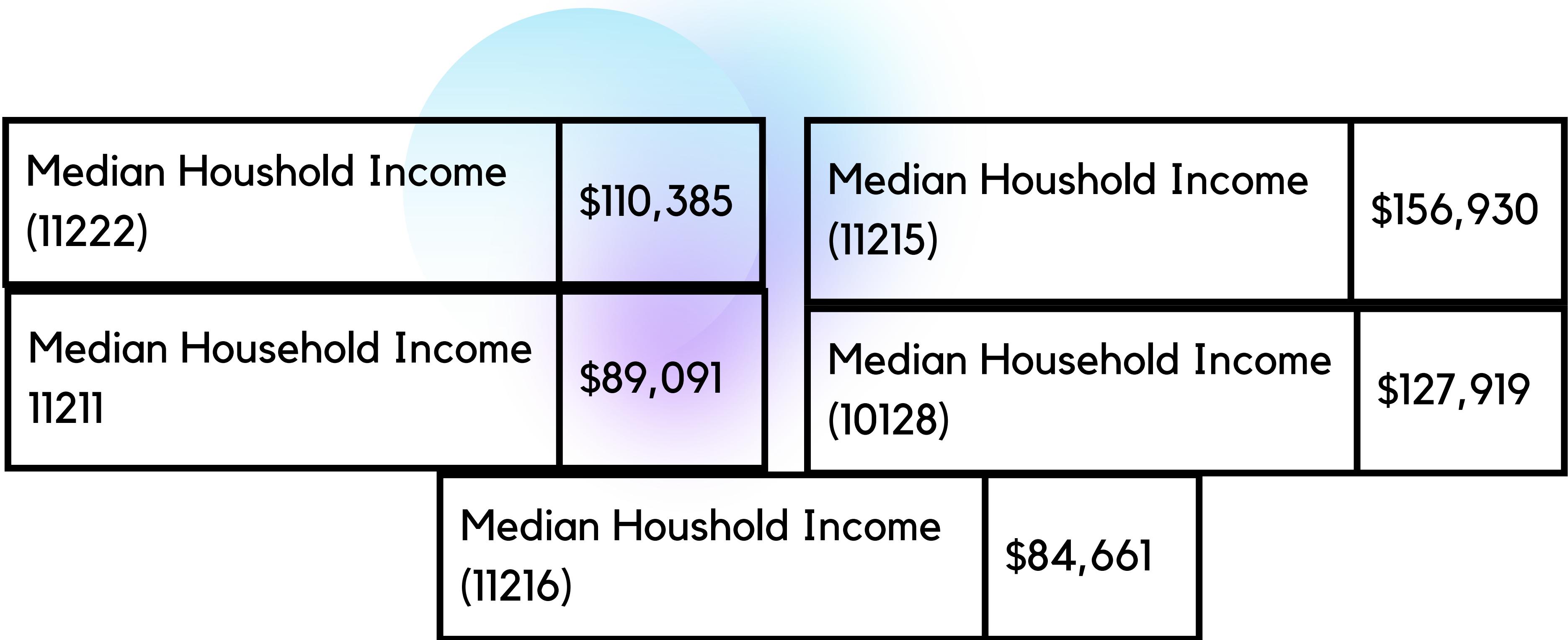
GREATEST 5 ZIP CODES



11216:
\$1.5M
11211:
\$1.5M
11222:
\$1.6M
11215:
\$2M
10128:
\$3.8M

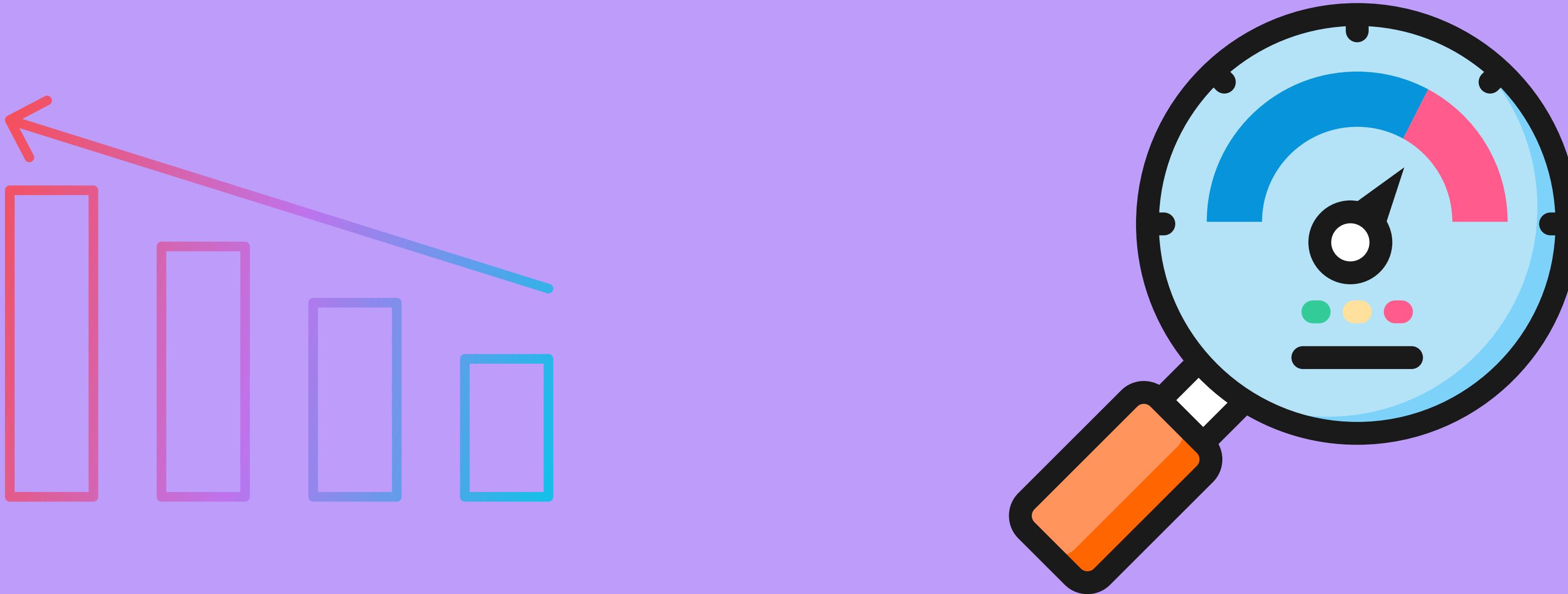
Median Income per Zip Code

According to ZipDataMaps



Time Series Model Prediction

Performance Zip Codes



Zip Code Forecast

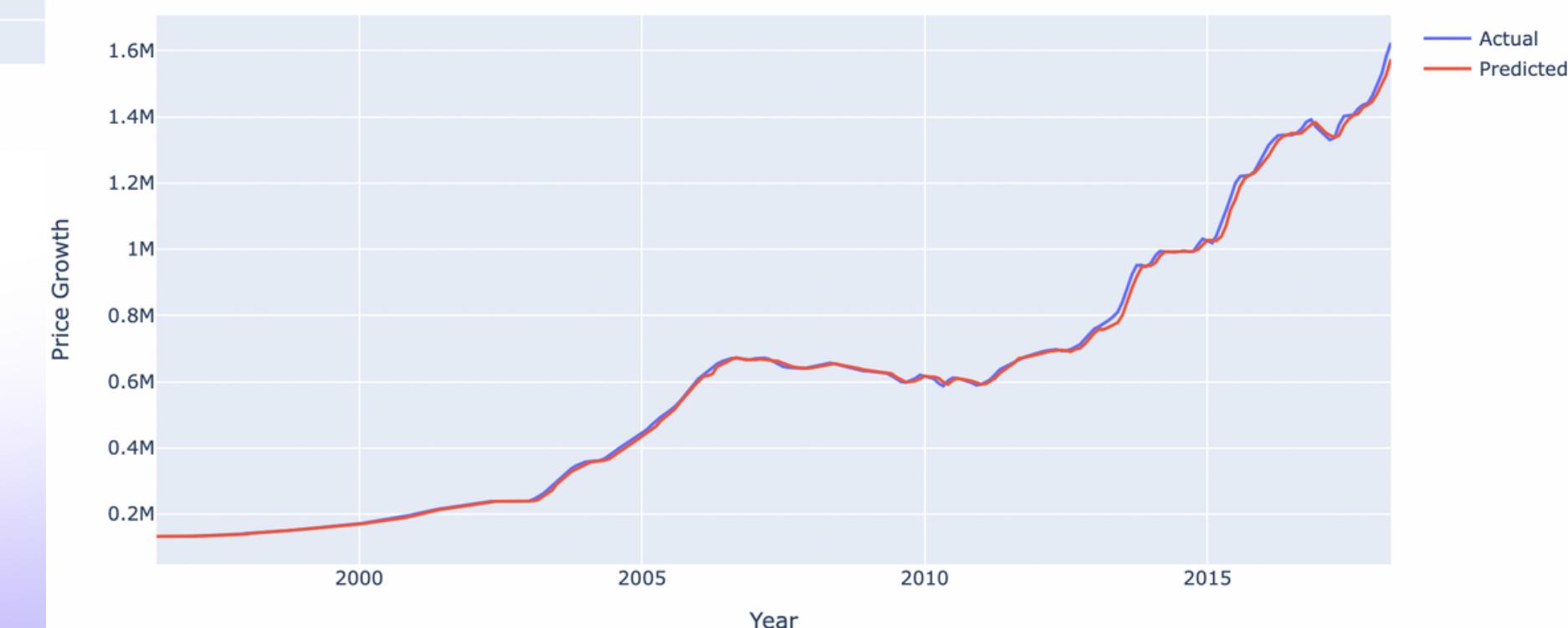
Highest Growth 10128

One-Step Ahead Forecast - 10128



2nd Greatest- 11211

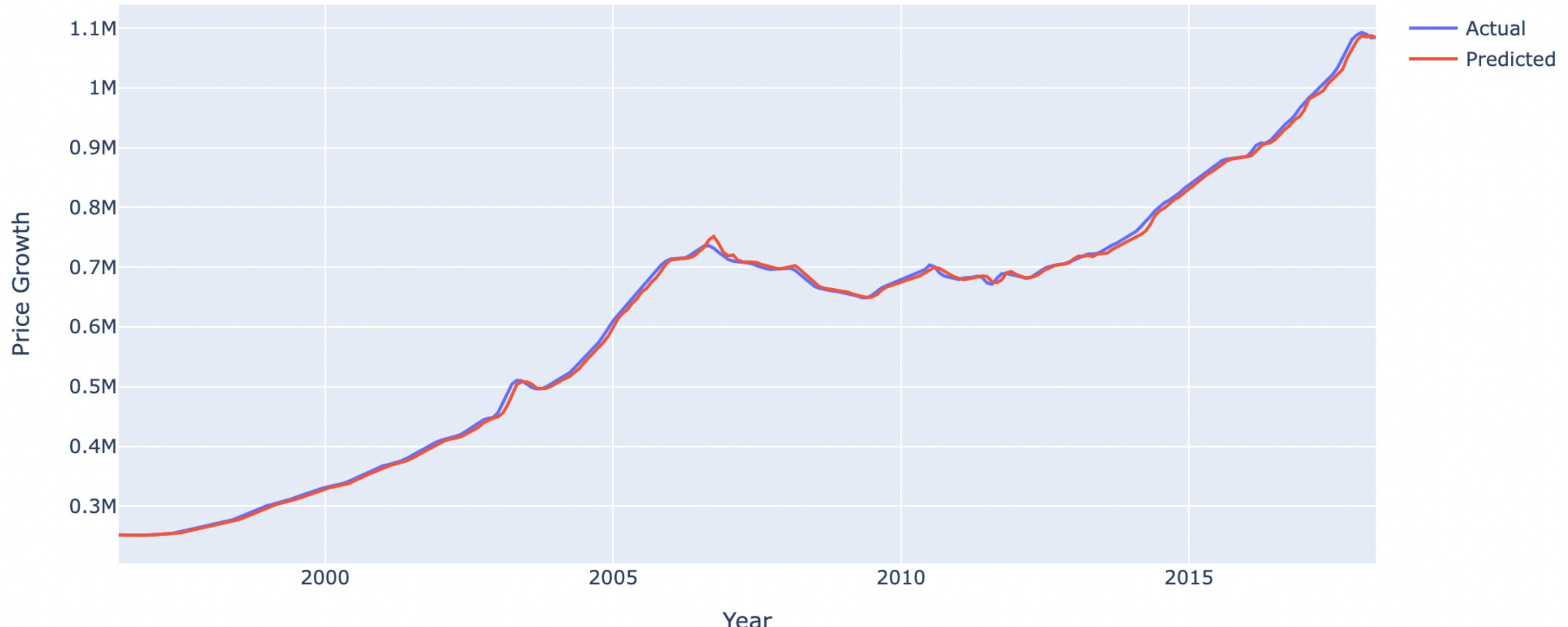
One-Step Ahead Forecast - 11211



Zip Code Forecast

Average Zip Code 11375

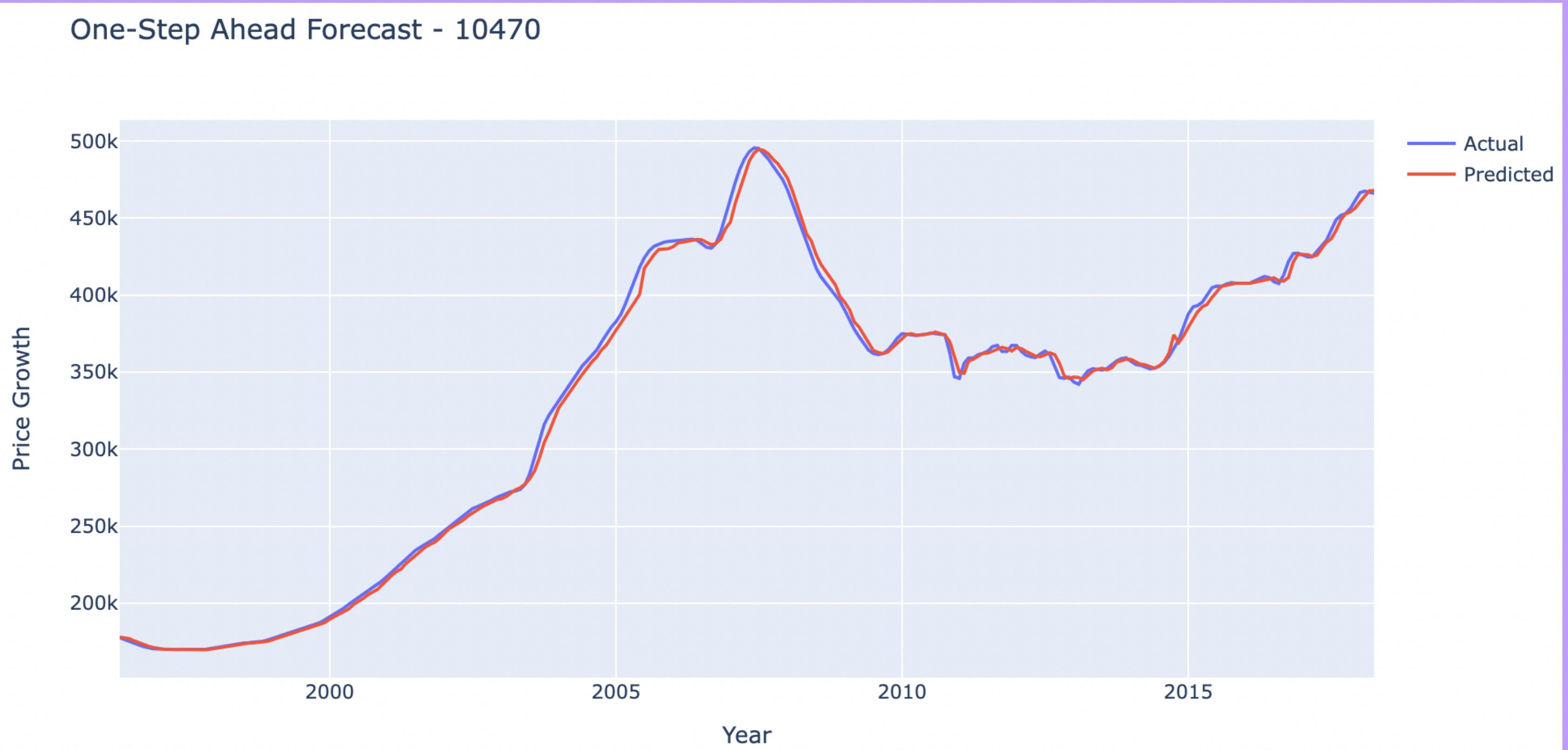
One-Step Ahead Forecast - 11375



Zip Code Forecast

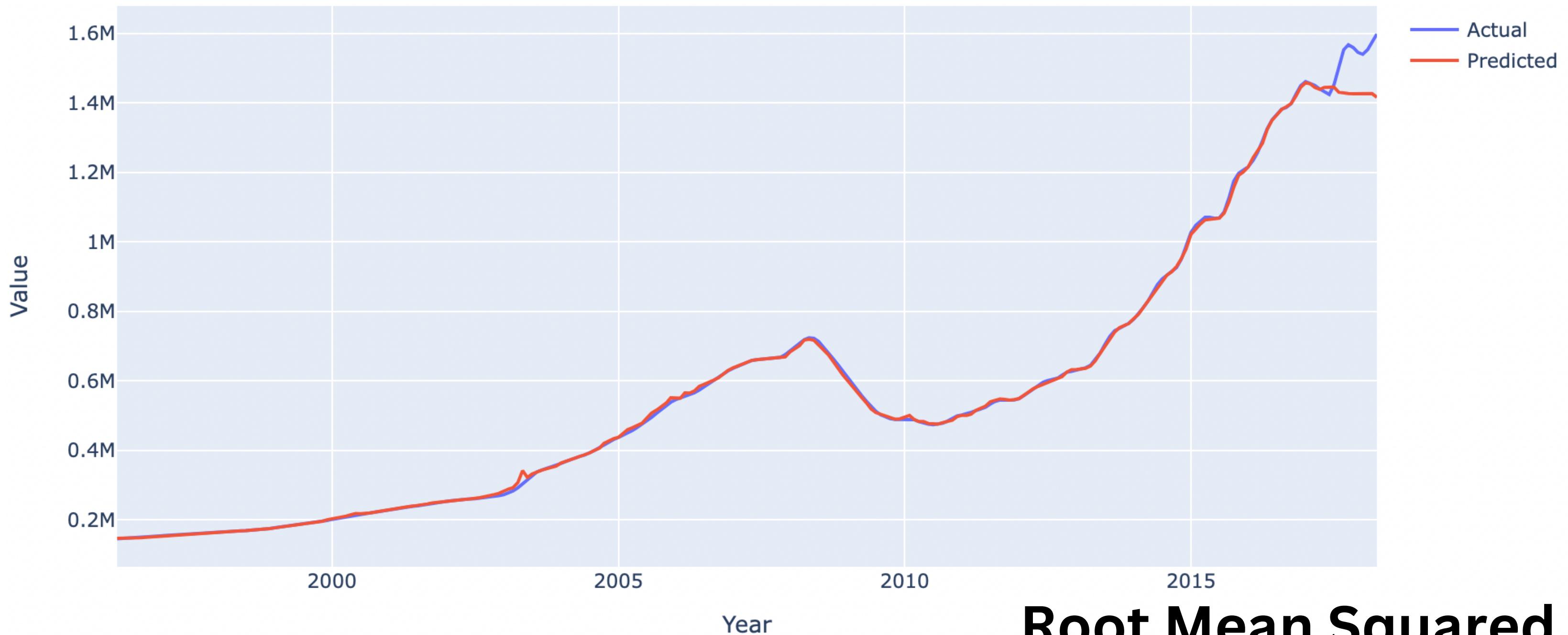
Worst Zip Code 10470

One-Step Ahead Forecast - 10470



Time Series Best Model

Random Forest Time Series Forecast



**Root Mean Squared Error
(RMSE): \$104,123.49**



Recommendation

Investing in the following Zip Codes:

10128- New York County, Upper East Side

11215- Kings County South Slope, Brooklyn

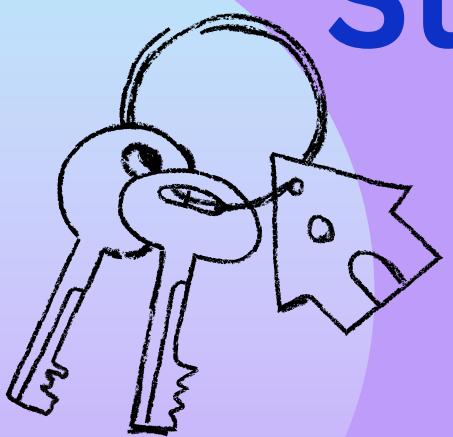
11222- Kings County Little Poland, Brooklyn

11211- Kings County Williamsburg, Brooklyn

11216- Kings County Stuyvesant, Brooklyn

Staying Away from low Price Growth Zip Codes:

10470



Thank You



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ANY QUESTIONS?

