

A modern, two-story white house with large glass windows and doors. The house is surrounded by a paved patio area and a swimming pool. A palm tree is visible in the background, and a large green bush is in the foreground on the right. The sky is blue with some clouds.

ZILLOW HOME SALES FORECASTING TIMES SERIES MODELING

By Heather McLauren

What areas in the Houston area are the best to invest in?

Is it better to invest in fast flips, under 1 year, or hold property for a few years to gain equity before selling?

1.

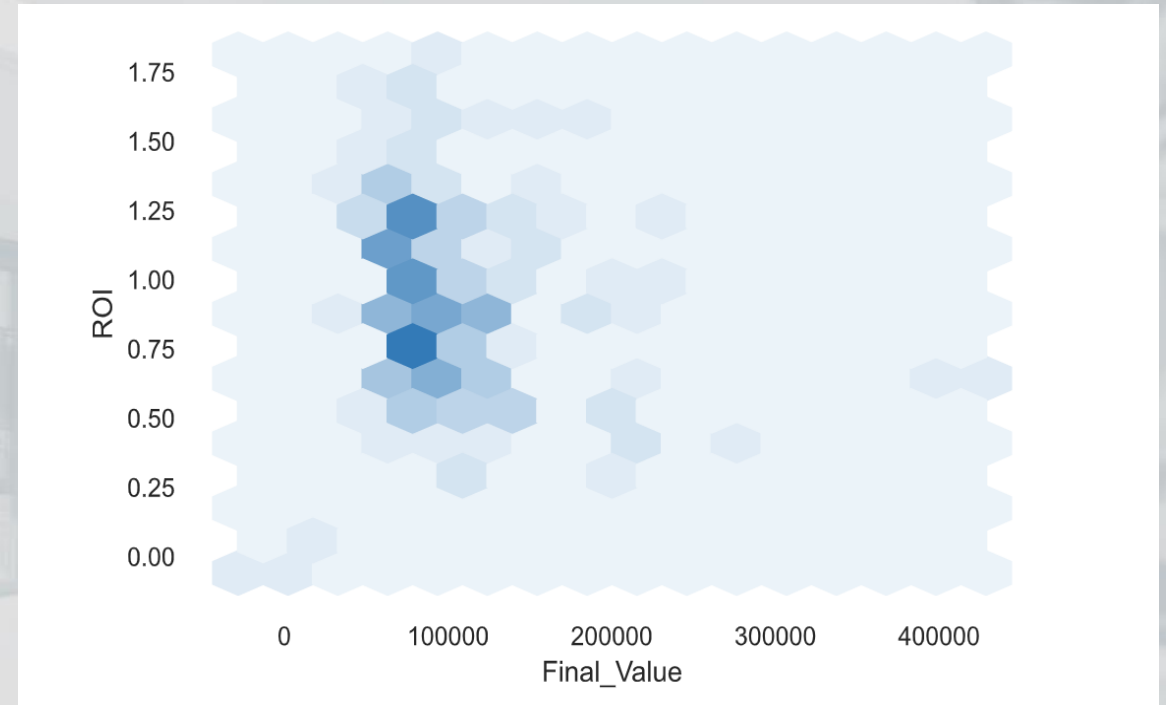
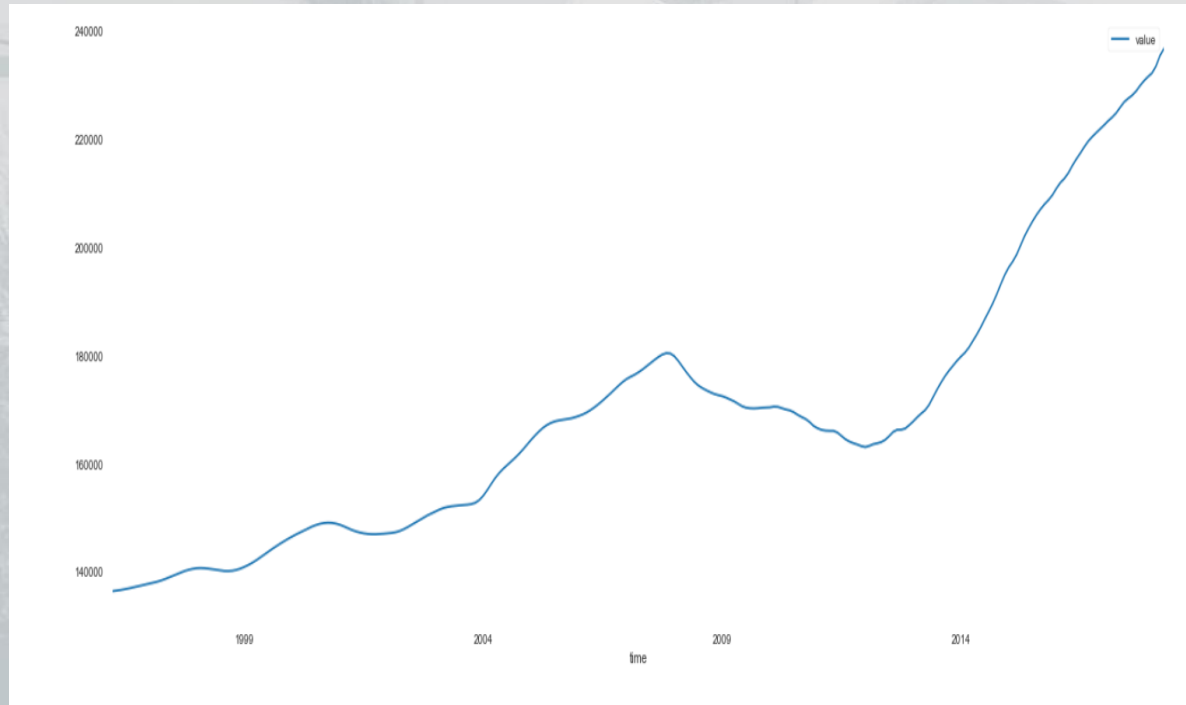
2.

3.

Is it better to concentrate on investing in one particular area or allocate investing evenly throughout?

What is the best areas in Houston to invest in?

Historical average growth of home values in Houston between 1996-2018



Profitable metric used: ROI of 10% a year. This mimics the S&P 500 annual average return and is the industry standard norm.

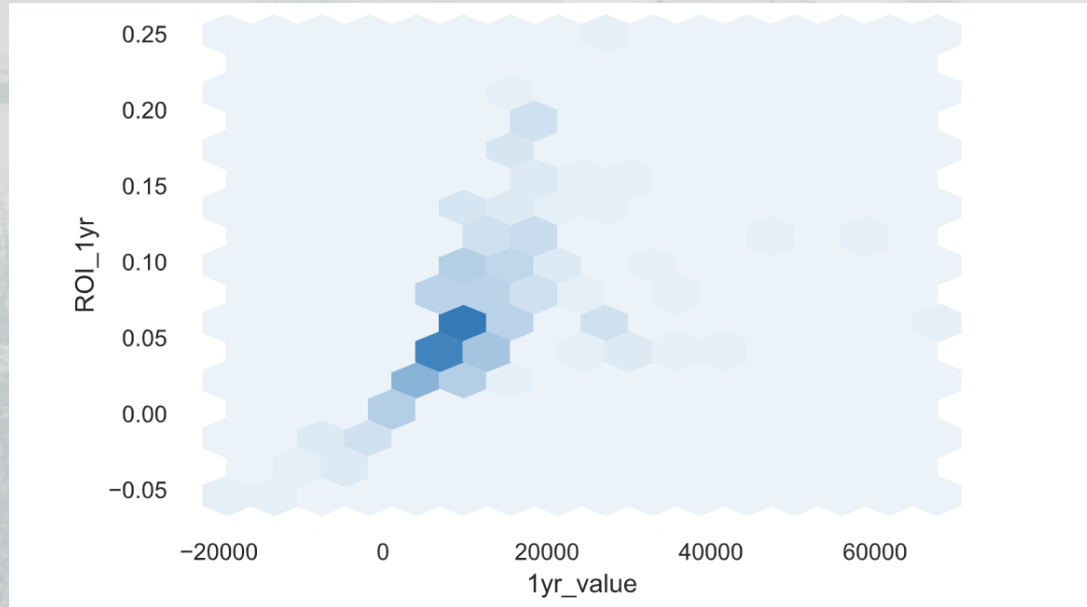
Historical ROI : Between 6.25%- 10.4%

Historical Returns: \$8,333 annual

A modern, multi-story house with a mix of light-colored stone or concrete and dark wood paneling. The house features large glass windows and doors, some of which are framed by white balconies. In the foreground, there is a rectangular swimming pool with clear blue water, surrounded by a light-colored stone deck. The pool is bordered by a low concrete wall on one side and a grassy area on the other. The sky is a clear, bright blue.

QUESTION 1

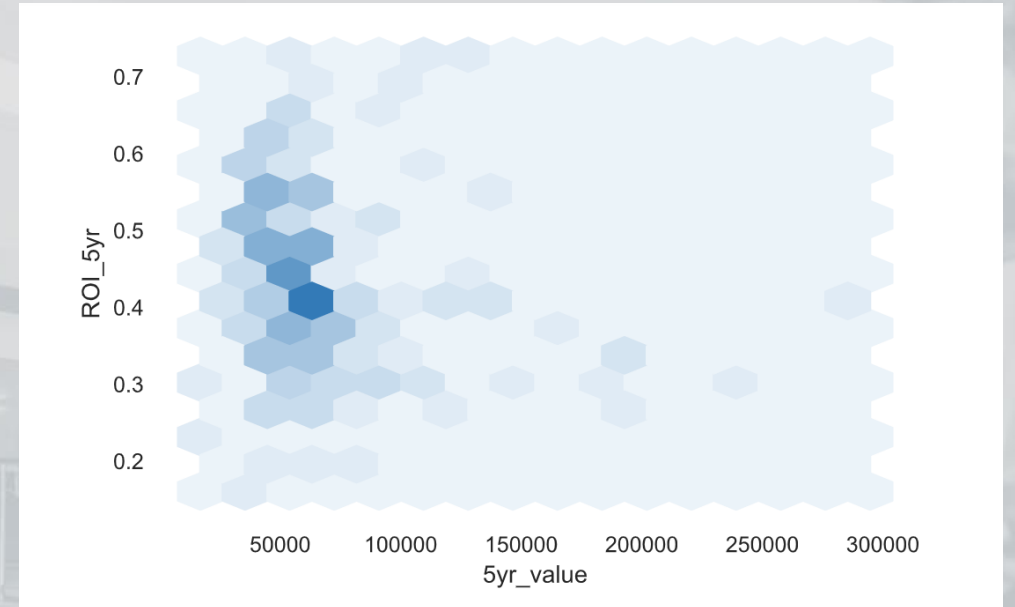
Is it better to invest in fast flips, under 1 year, or hold property for a few years to gain equity before selling?



Overall:
1 Year ROI: 6.4%
1 Year Return: \$11,898

1 Year Breakdown @ 10% ROI

1 Year ROI: 13.7%
1 Year Return: \$19,223



Overall:
5 Year ROI: 43.3%
5 Year Return: \$66,807

5 Year Breakdown @ 10% ROI

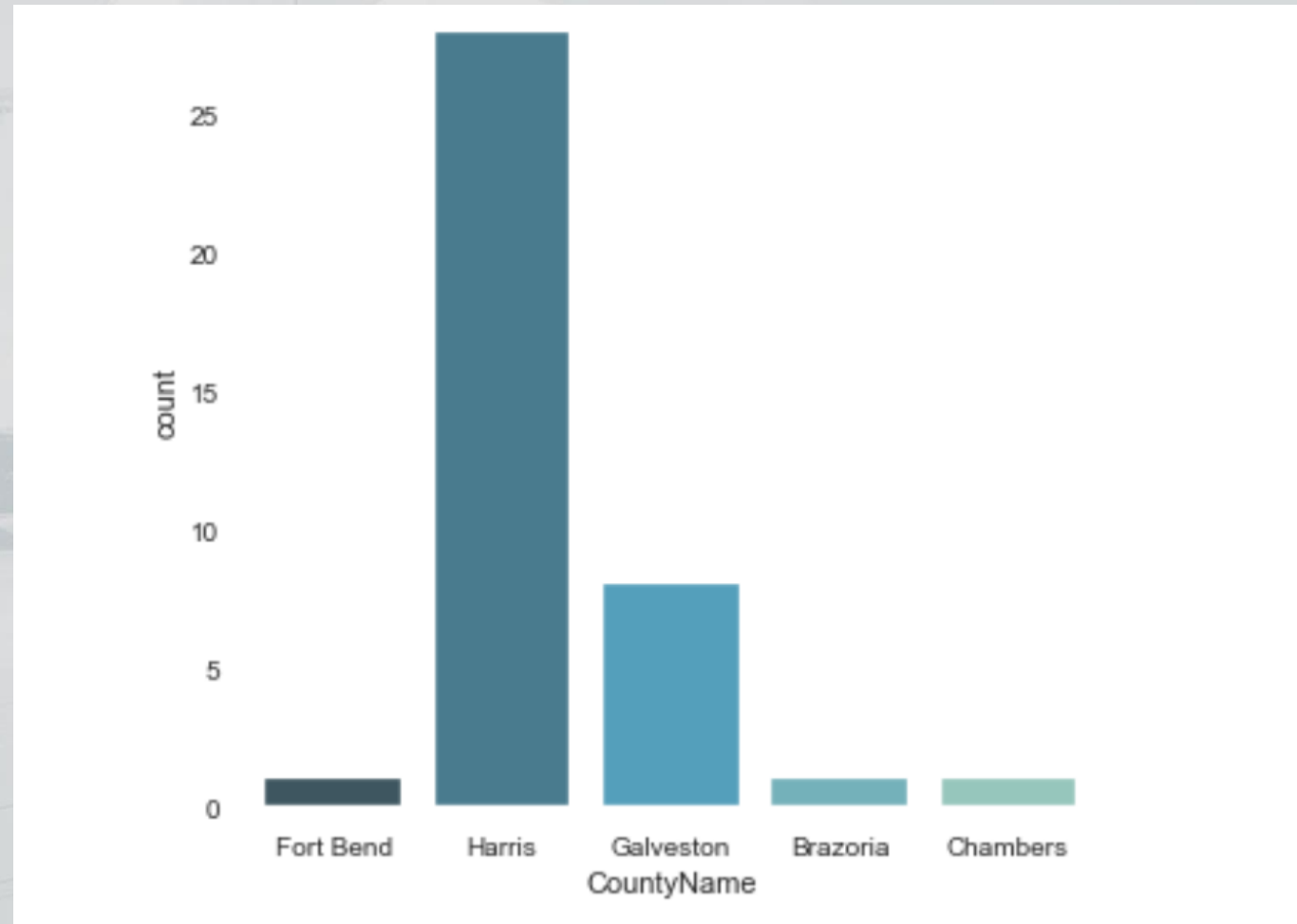
1 Year ROI: 11.5%
1 Year Return: \$11,804

5 Year Breakdown:
8.66% Annual ROI
\$13,361 Annual Return



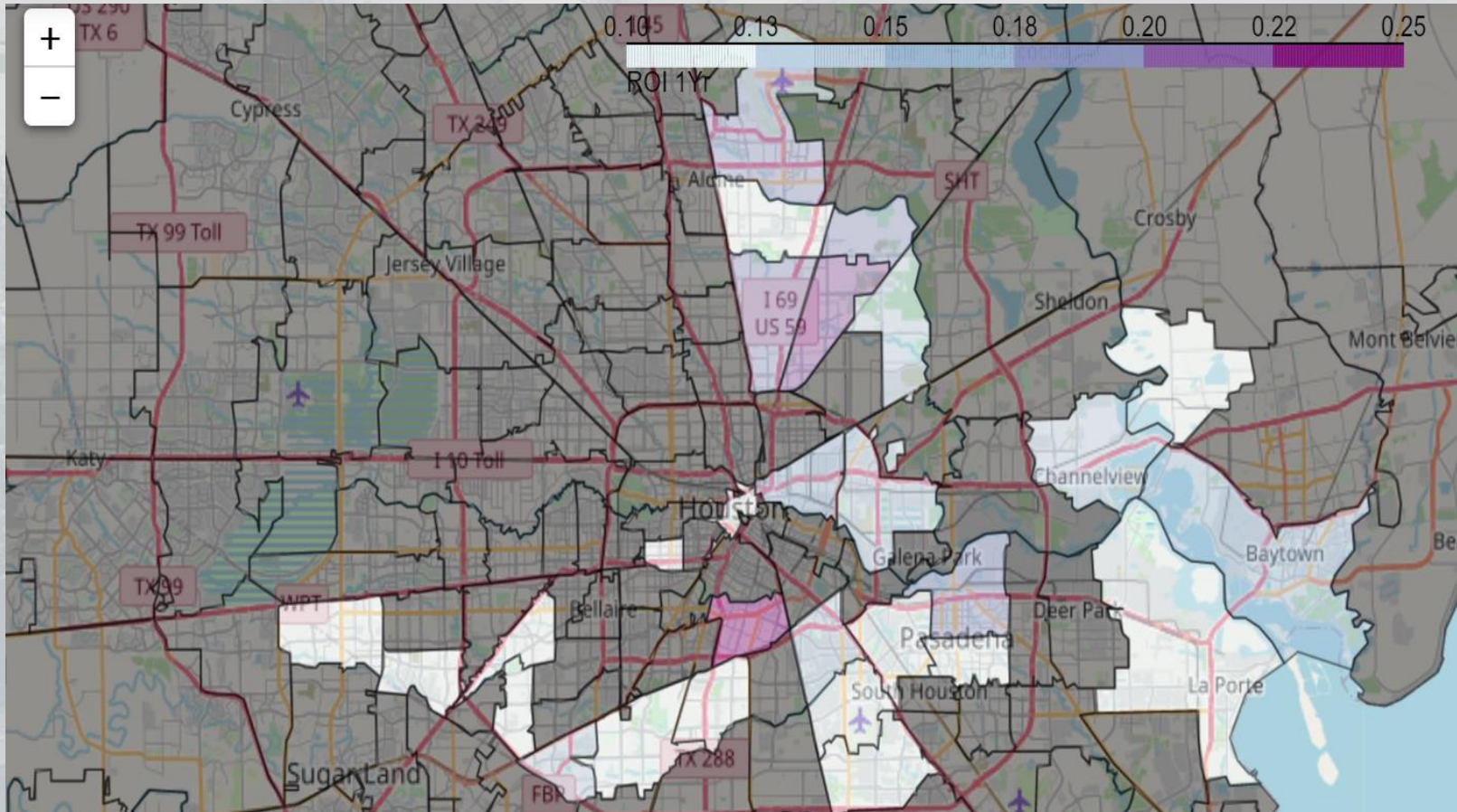
QUESTION 2

What is the best areas in Houston to invest in?



Took this sample from the ROI 1-year homes that produced 10% or more a year.

What is the best areas in Houston to invest in?

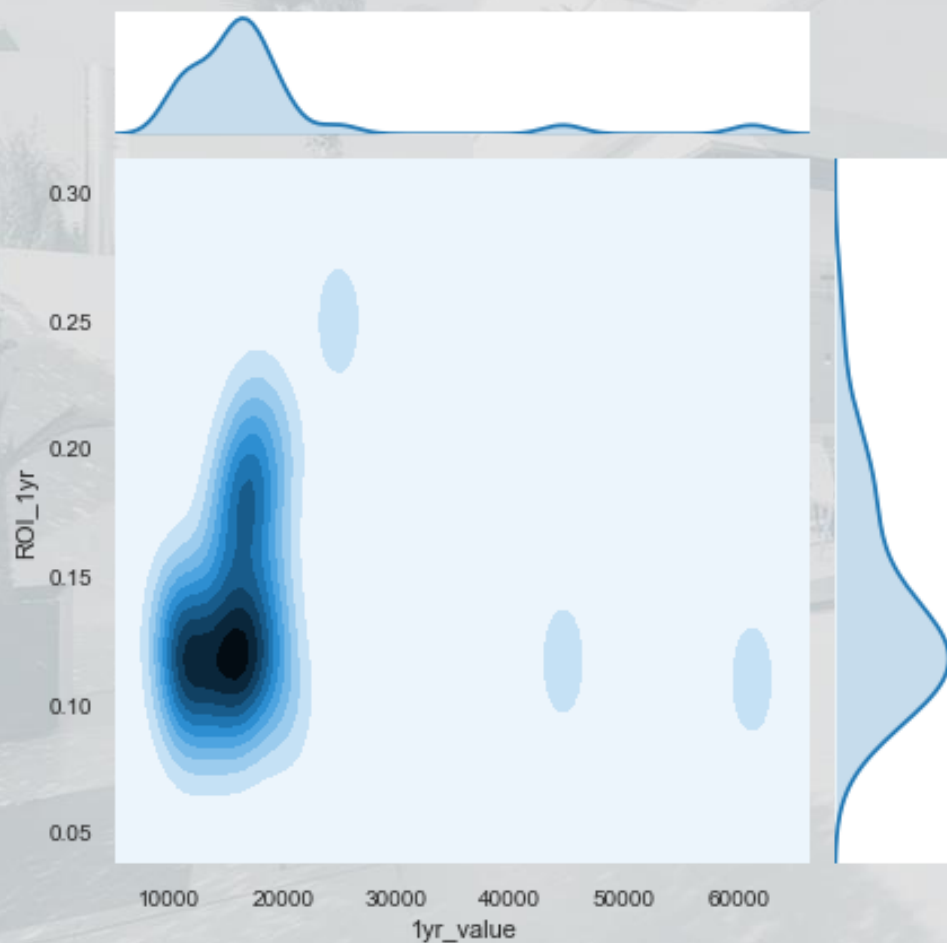


Took this sample from the ROI 1-year homes that produced 10% or more a year.

QUESTION 3



Is it better to concentrate on investing in one particular area or allocate investing evenly throughout?



Invest in Harris County Alone?

Harris County 1 Year ROI: 13.9%
Harris County 1 Year Return: \$18,460

1 Year ROI: 13.7%
1 Year Return: \$19,223

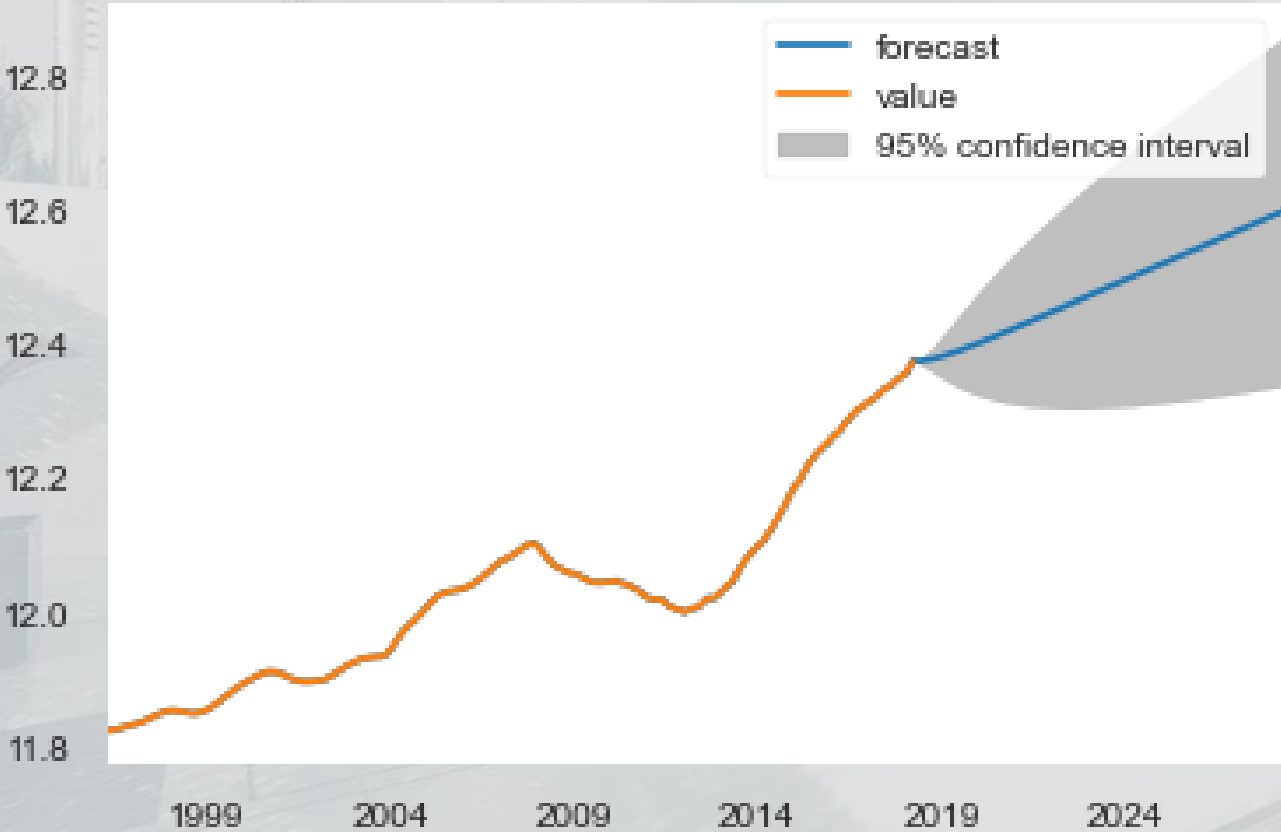
Harris County Investment Alone:
ROI increase: 0.98%
Return loss: \$763



FORECAST RESULTS

TIME SERIES FORECASTING RESULTS

RSS: 0.0001



Predictions

time	
2017-12-01	231288.124285
2018-01-01	232065.261273
2018-02-01	232611.139082
2018-03-01	234599.334635
2018-04-01	236632.766481

Original Values

	value
time	
2017-12-01	231393.048128
2018-01-01	232050.267380
2018-02-01	233325.668449
2018-03-01	235267.914439
2018-04-01	236575.401070

A modern two-story house with a white balcony and a swimming pool. The house features a white exterior with a prominent balcony on the upper floor. The balcony has a white railing and is supported by white columns. The ground floor has a large glass door and a wooden door. To the right of the house is a modern extension with a wooden facade and large glass windows. In the foreground, there is a swimming pool with a curved edge and a paved deck. The pool is surrounded by a lush garden with various plants and trees. The sky is blue with some clouds.

RECOMMENDATIONS

Recommendations

1.

Invest in fast flips of 1 year instead of holding on to properties for 5 years to gain equity.

2.

Invest in the top 5 counties in the Houston area for the best ROI, but be selective of which homes because they are scattered all over. Conduct further analysis on each individual home to ensure profitability.

3.

There is a slight decrease in investing in Harris County alone, but there is some freedom due to the closeness in overall returns.

Future Work

1.

Look into the remodeling costs associated with investing

2.

What is the minimum amount needed to invest to maximize profits?

3.

How does the housing profitability increase in Houston compare to other cities in Texas? Does it make sense?

A low-angle photograph of a modern multi-story apartment building. The building features a mix of blue and orange facades. Numerous balconies with black metal railings are visible, extending from the building. The sky is a clear, light blue. The text "THANK YOU" is centered over the image.

THANK YOU