

WHERE TO INVEST

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UNOFFICIAL INTELLIGENCE GROUP

BUSINESS OVERVIEW



SCENARIO

We have been contracted by MTB Investment Group to assist in the company's growth and expansion efforts, with a focus on their real estate portfolio.



BUSINESS PROBLEM

What are the top 5 zip codes to invest in?



WE WILL PROPOSE...

That MTB invests in developing real estate in 5 zip codes in the Metropolitan Houston, Texas area.

AGENDA



**Data
&
Methods**



Models



**Conclusion
&
Recommendations**



DATA & METHODS

DATA

- Zillow data
 - April 1996 - April 2018
 - 14,723 zip codes
 - Median for each zip code

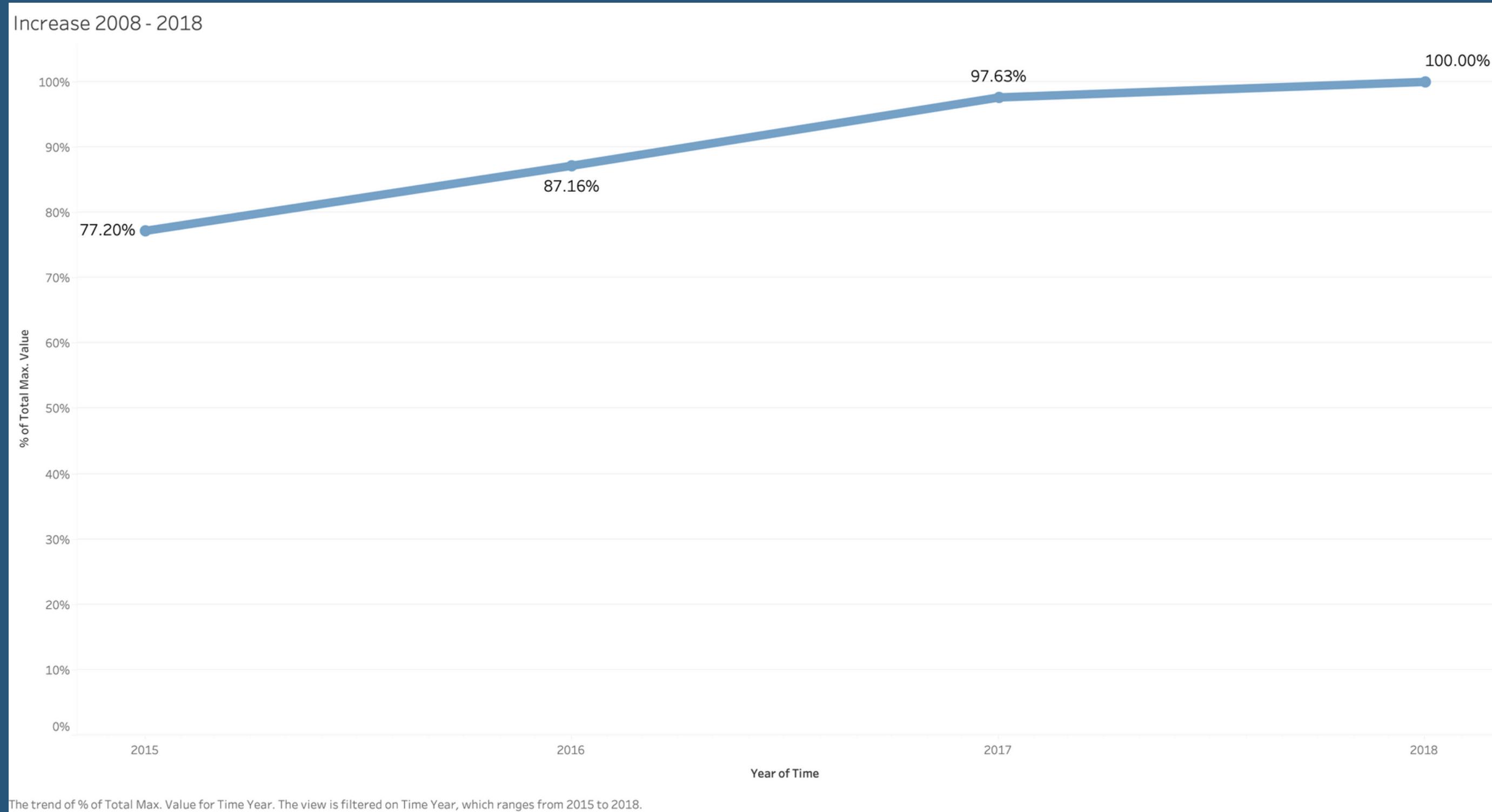
METHODS

- January 2015 - April 2018
- Zip code selection
- Auto ARIMA / SARIMAX Modeling

A CLOSER LOOK AT THE DATA



EXPLORING THE DATA



Median house
prices nationwide
by month from
the period
January 2015 -
April, 2018

A CLOSER LOOK AT THE DATA

Zip Code Selection

- Narrowing dataset to include only zip codes in the city of Houston
- Used SizeRank to find the top 25% of zip codes with the highest rate of urbanization
- Used dates ranging from January, 2015 - April, 2018 for analysis

A CLOSER LOOK AT THE DATA

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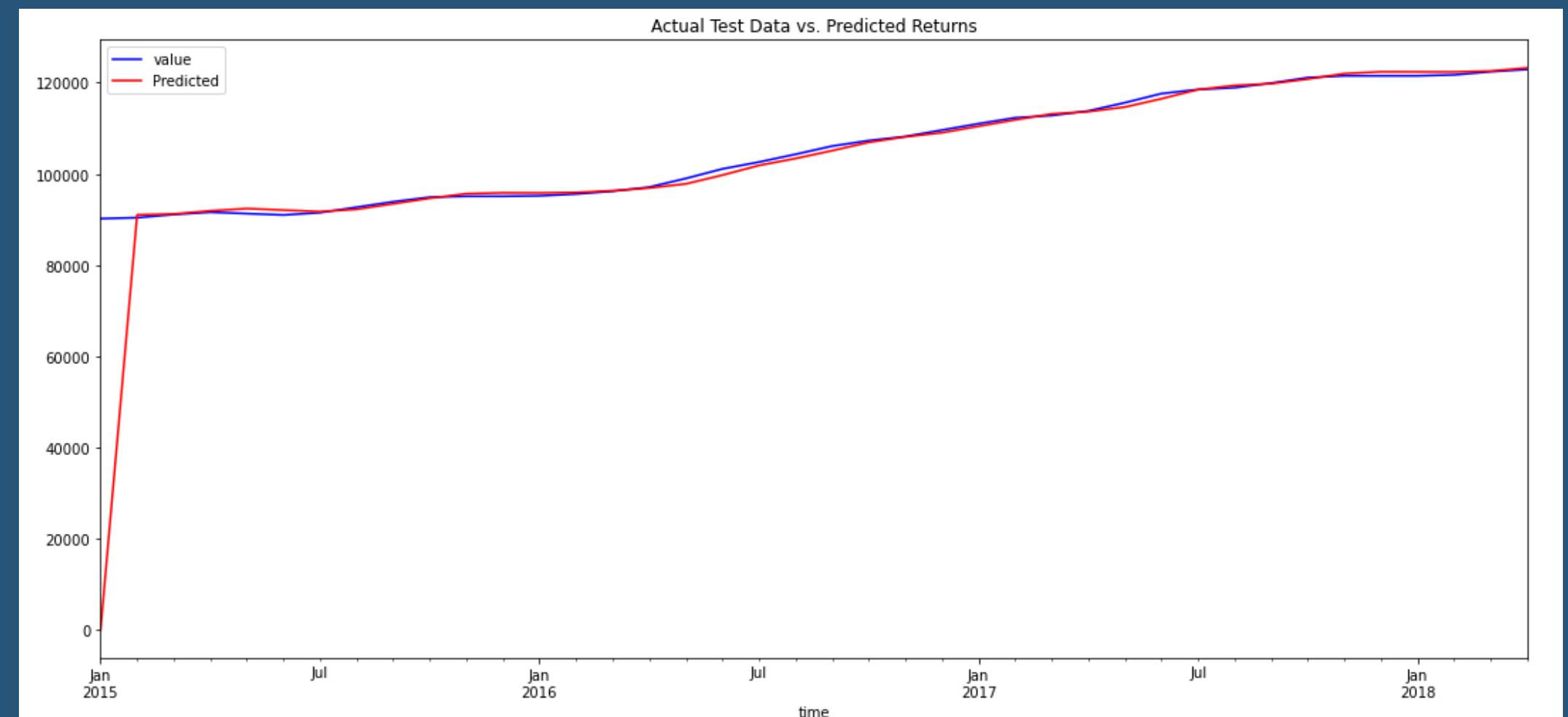
A CLOSER LOOK AT THE DATA

Zip Code Selection

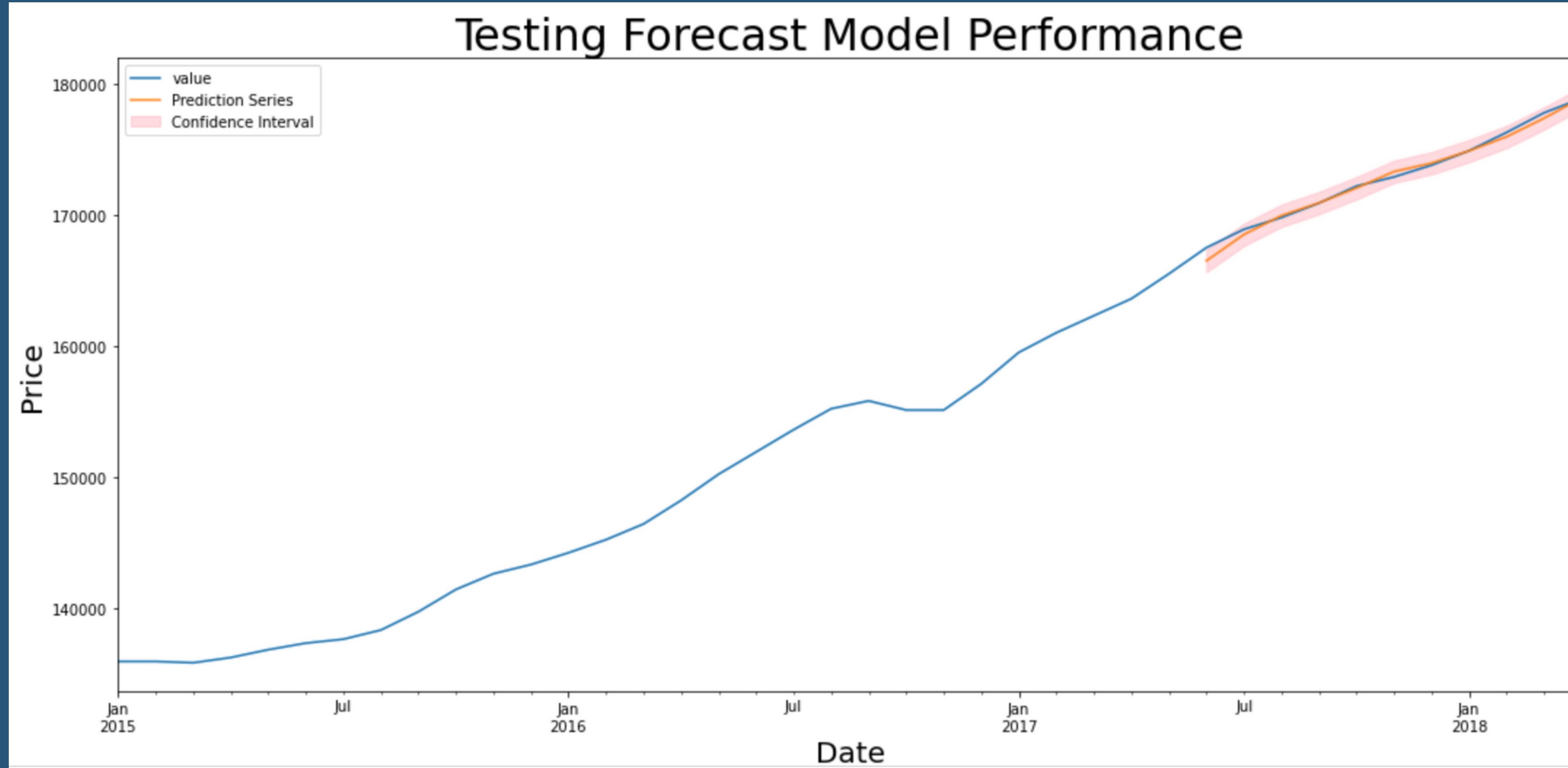
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SARIMAX Modeling

- Estimated best SARIMAX parameters for each of the top 5 zip codes
- Actual vs. predicted MAPE: 2-4%



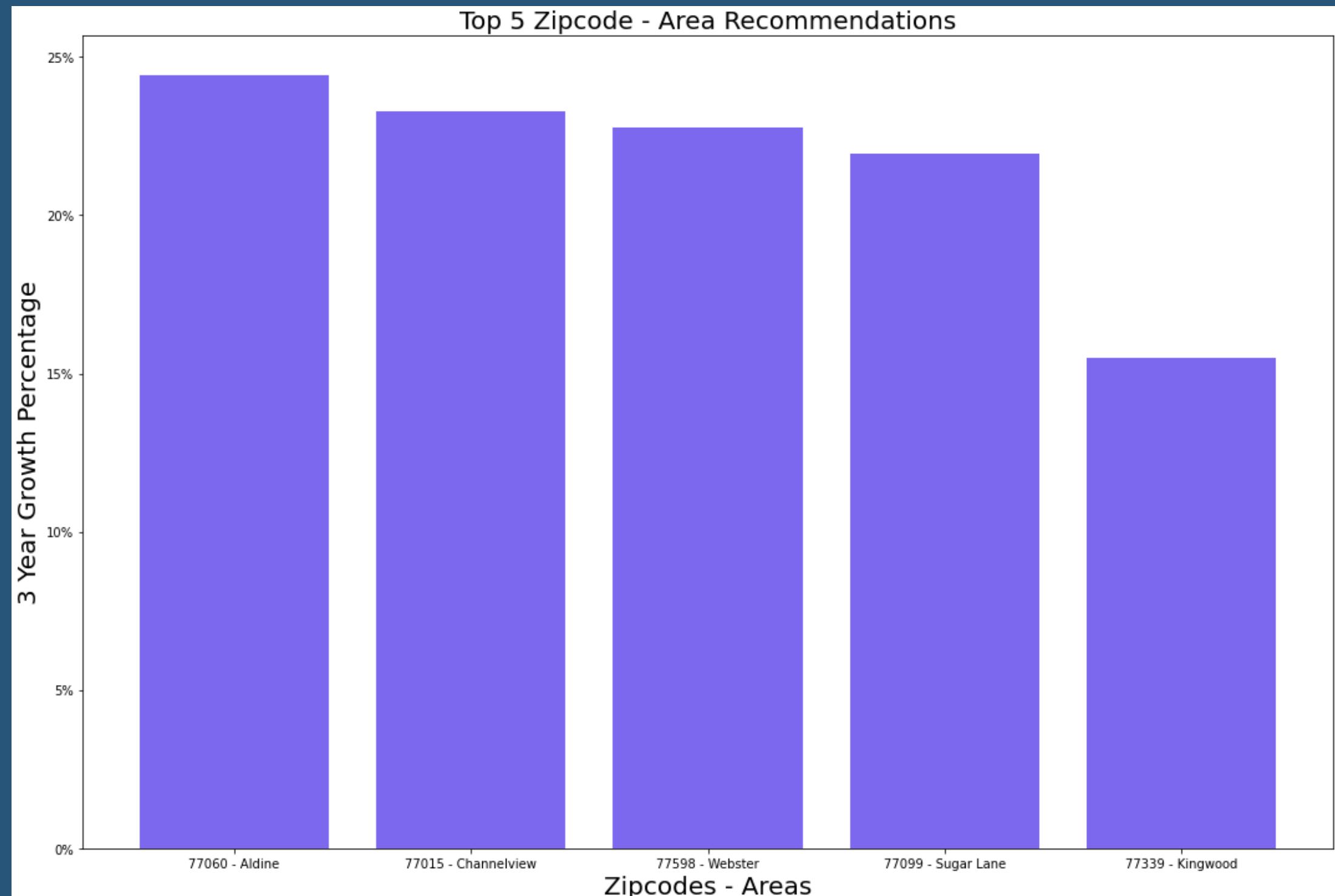
SARIMAX Modeling



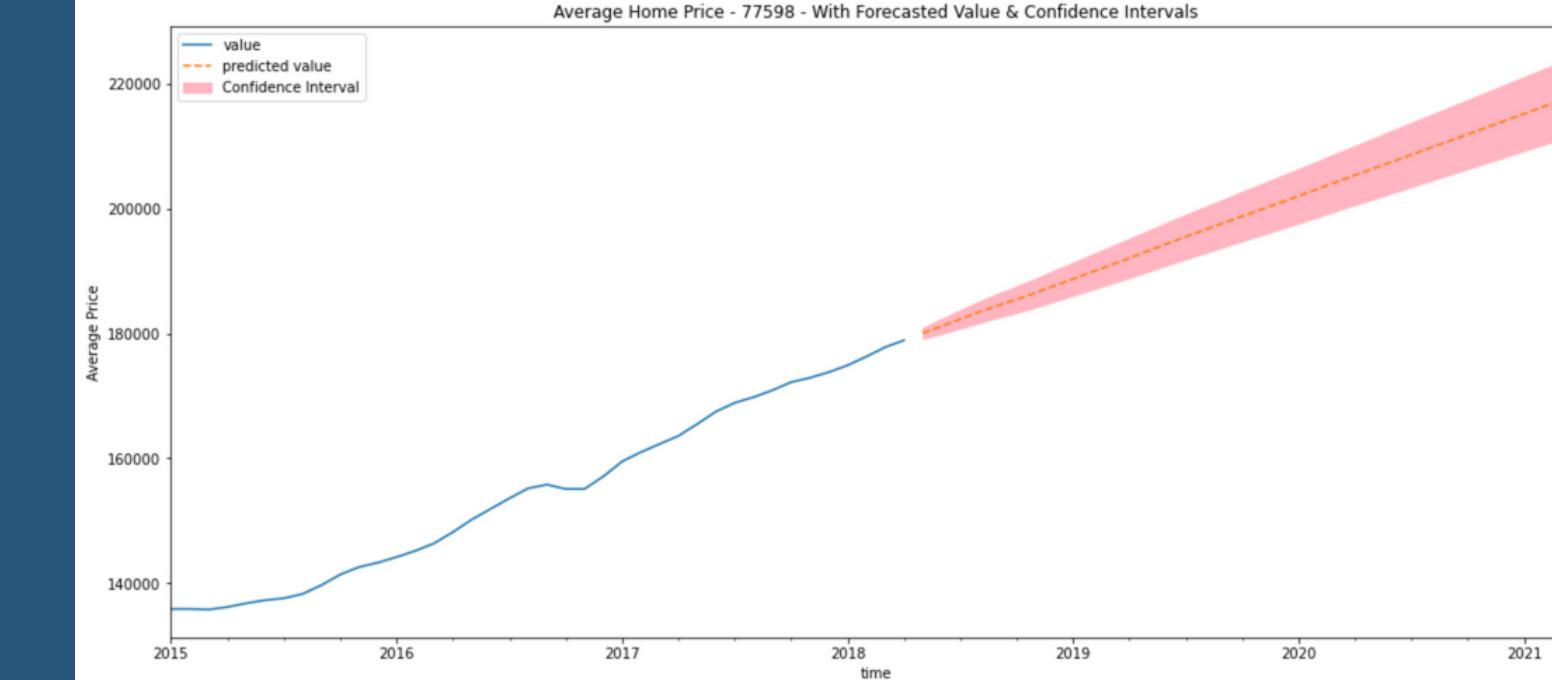
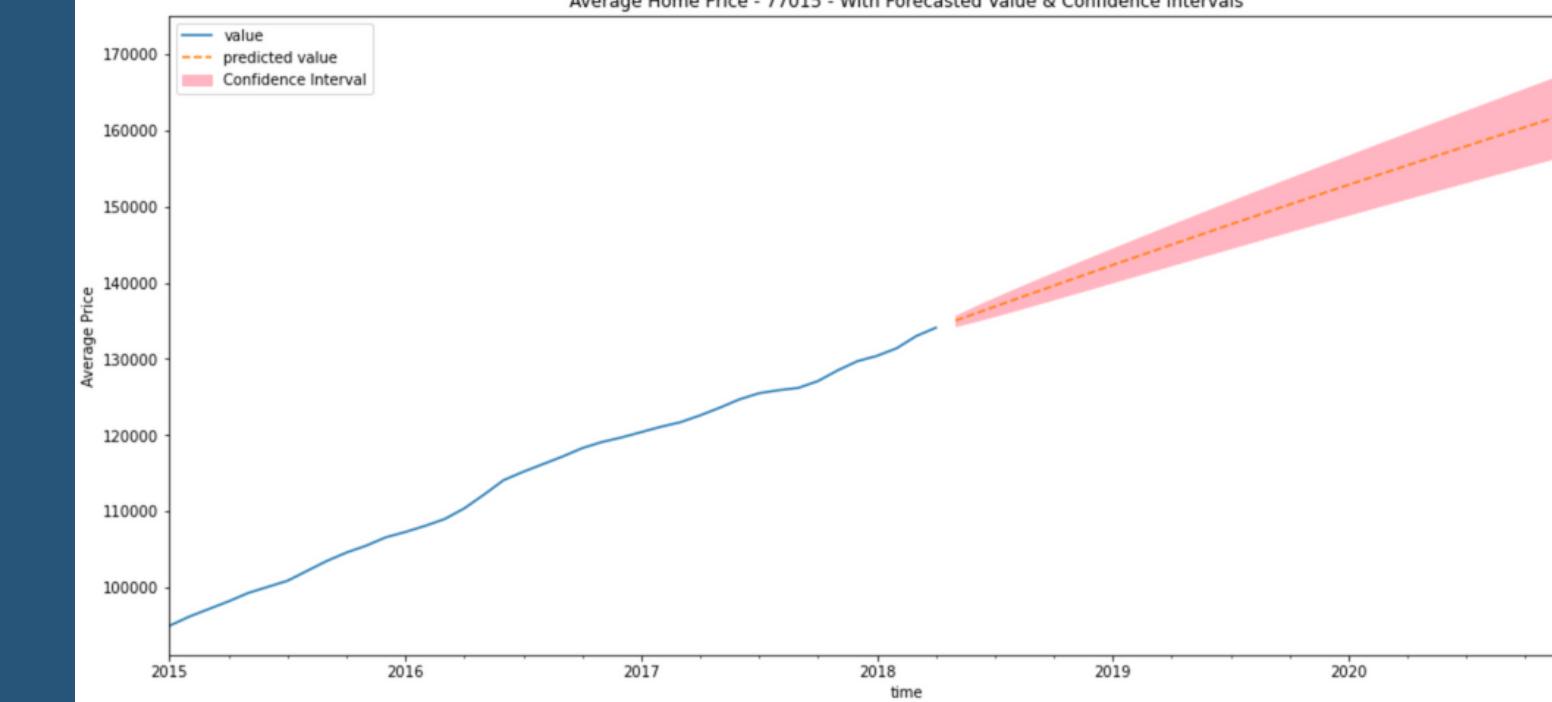
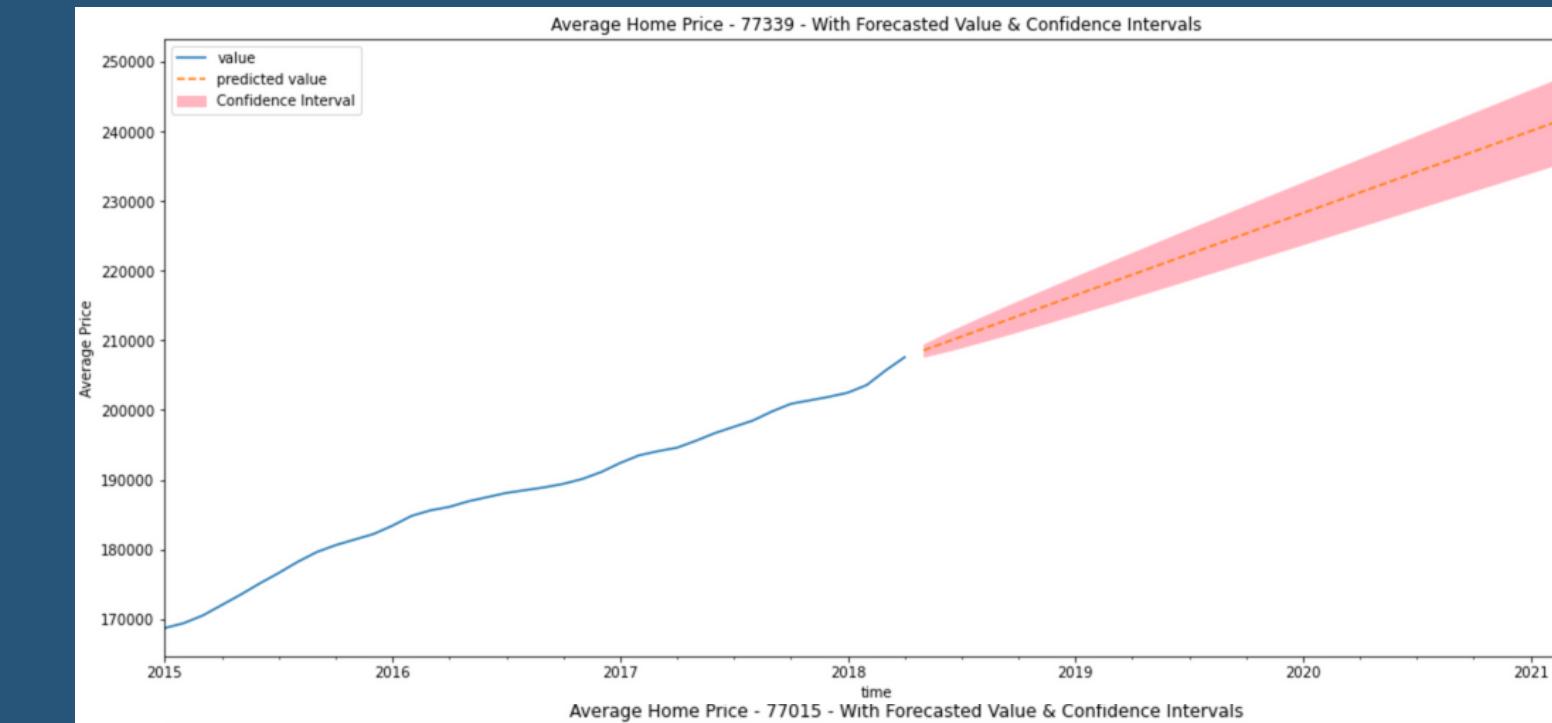
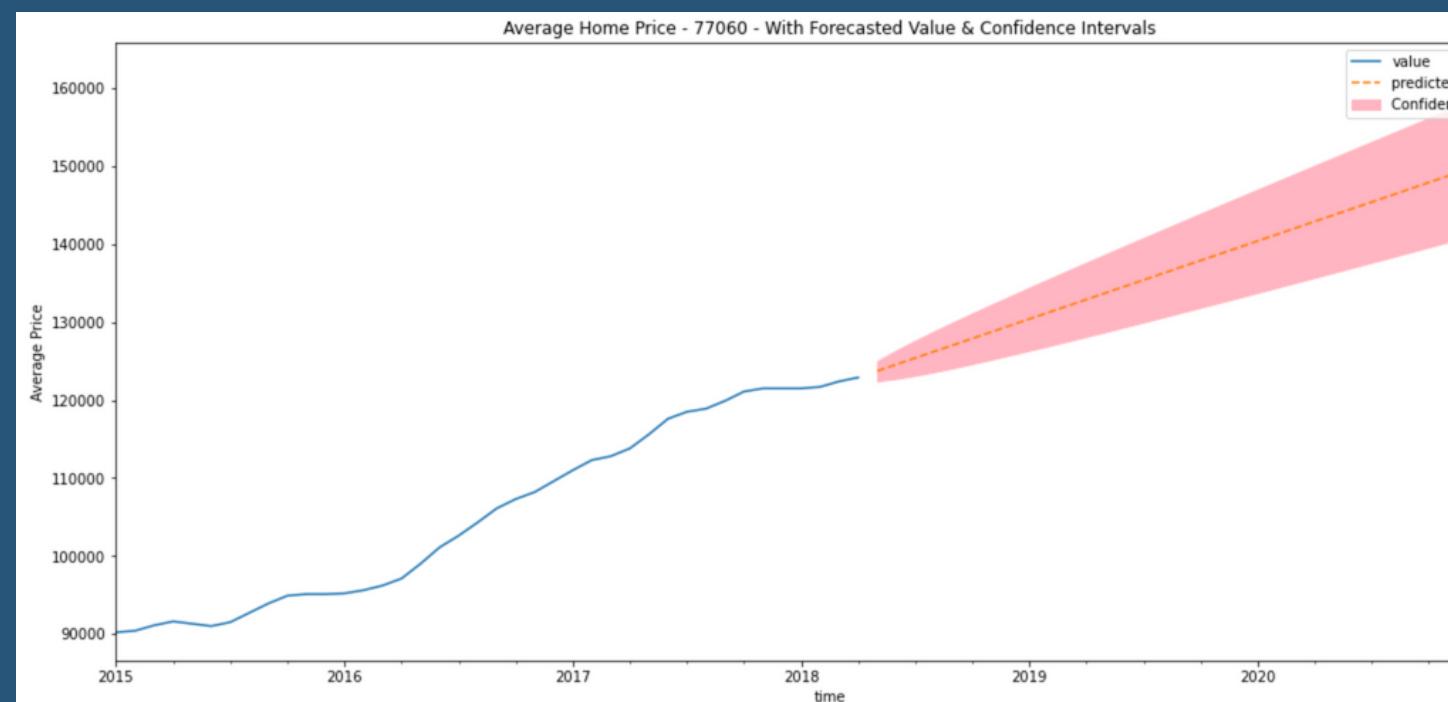
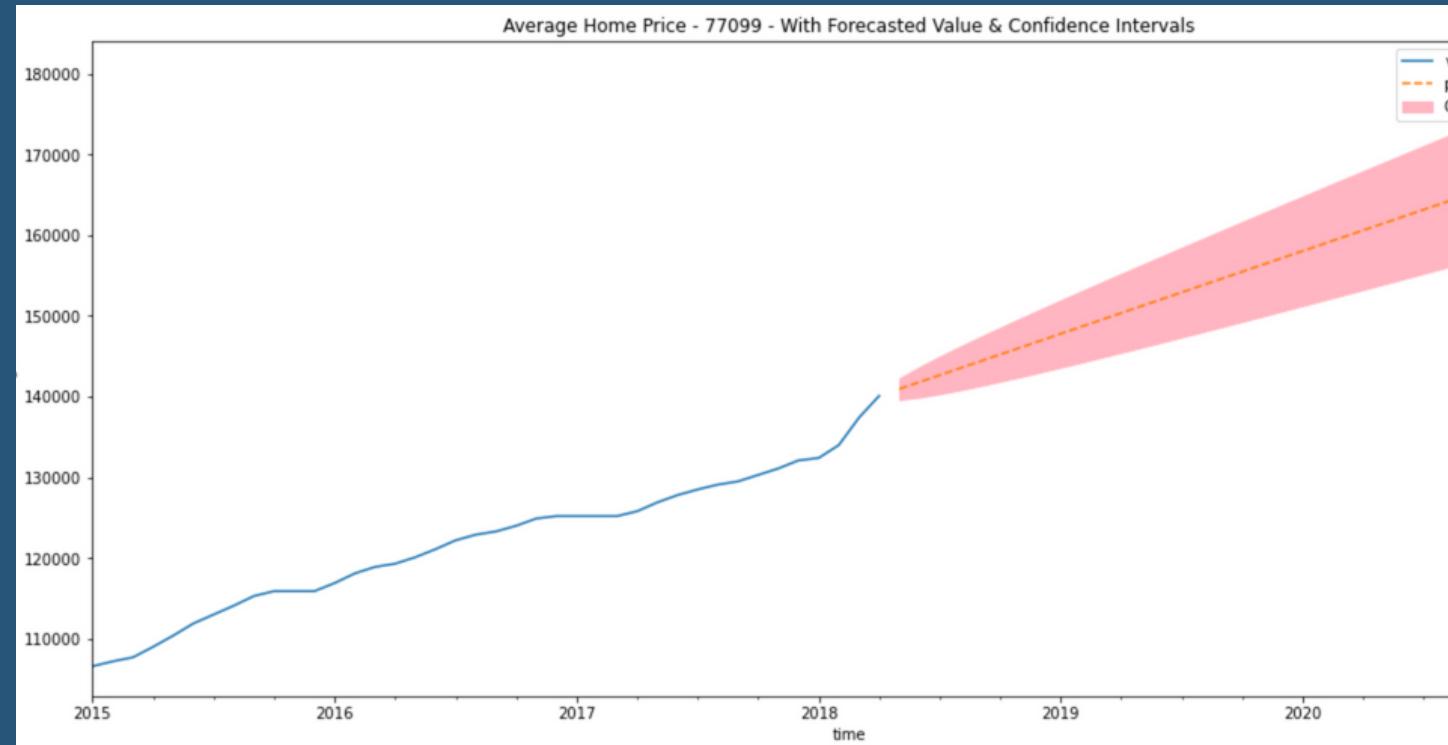
SARIMAX Model Results

Best 3 Year Growth Expectations

- 77060 is expected to grow by 24%
- 77015 is expected to grow by 23%
- 77598 is expected to grow by 23%
- 77099 is expected to grow by 22%
- 77339 is expected to grow by 15%



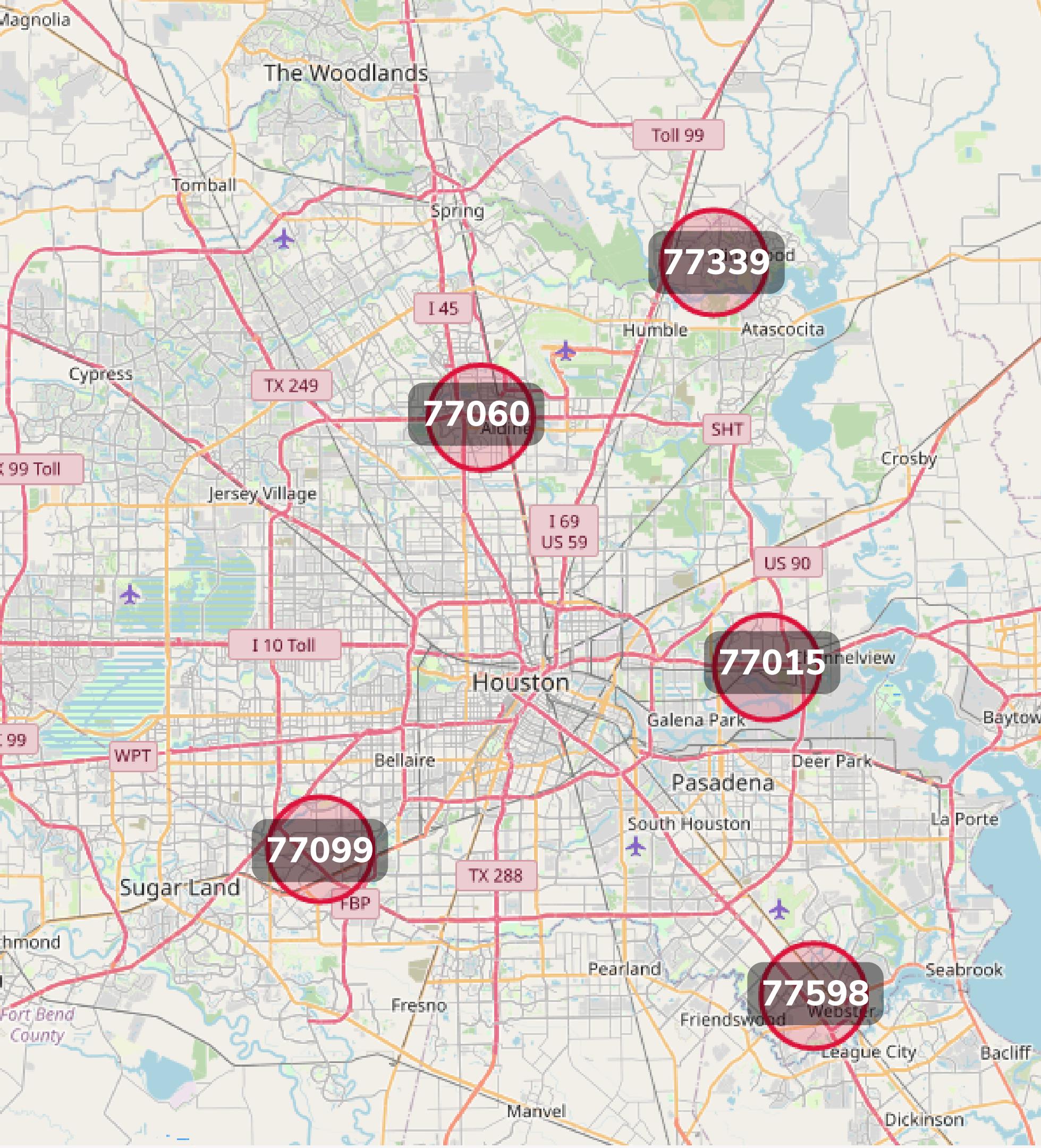
SARIMAX Model Forecasts



CONCLUSION

TEXAS

Based on our forecasts, the cities in these five zip codes in Houston, Texas are the most promising areas for real estate investment.



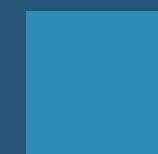
RECOMMENDATIONS

LOCATION

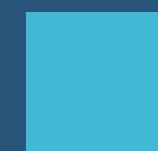
- Focus on urban areas of Houston for higher potential of growth
- We recommend investing in these 5 zip codes
- We also recommend continued monitoring of growth to anticipate fluid market conditions



77060 - Aldine area



77015 - Channelview area



77598 - Webster area



77099 - Sugar Land area

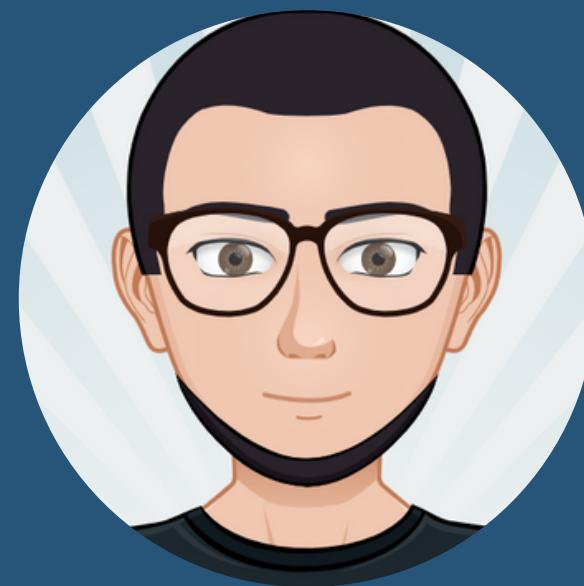


77339 - Kingwood area



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Thank You!



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Data Scientist

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**GREG
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Data Scientist

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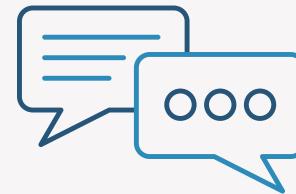


**ANNA
CHANTHARASOUK**

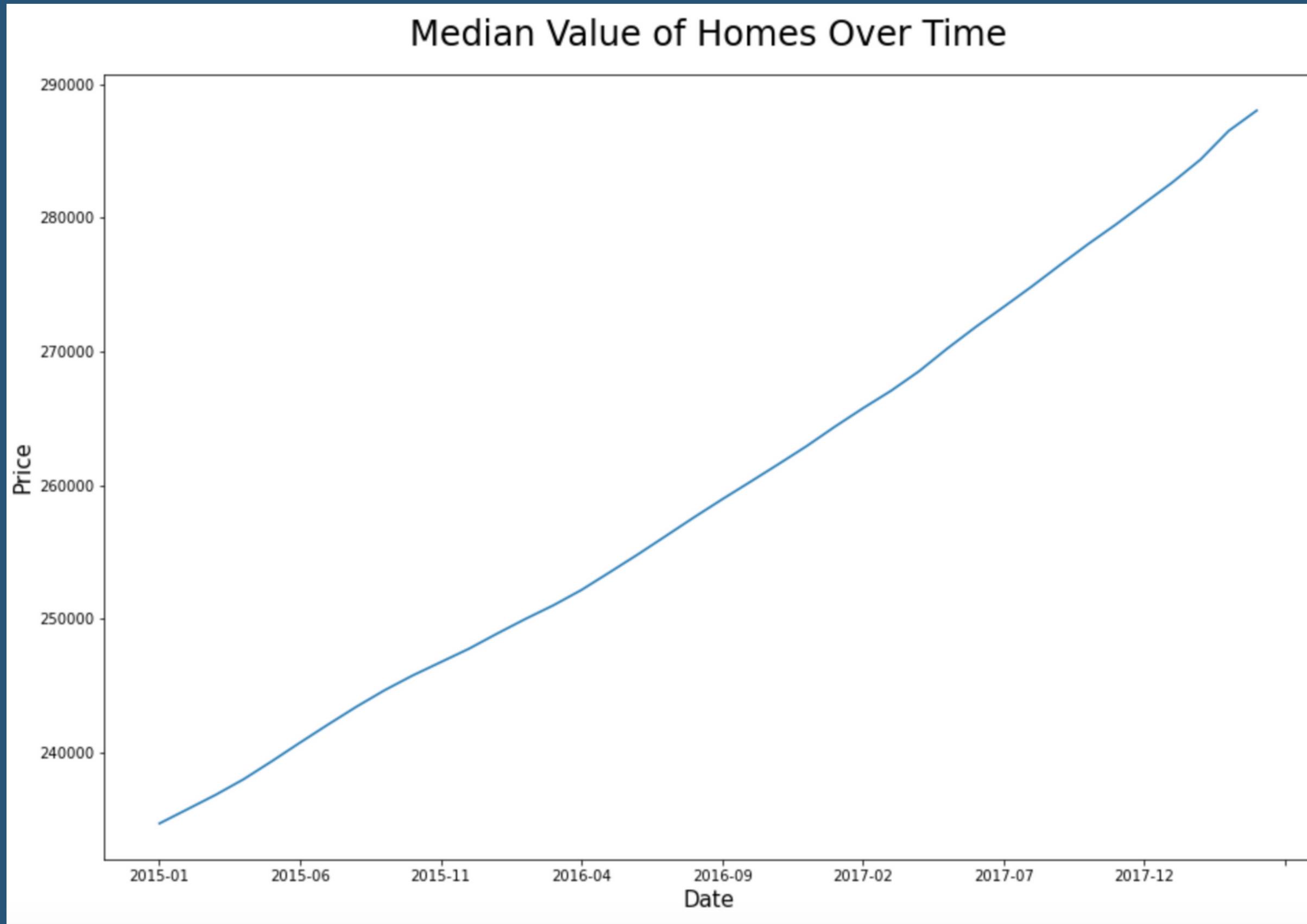
Data Scientist

[LinkedIn](#)

APPENDIX



A CLOSER LOOK AT THE DATA

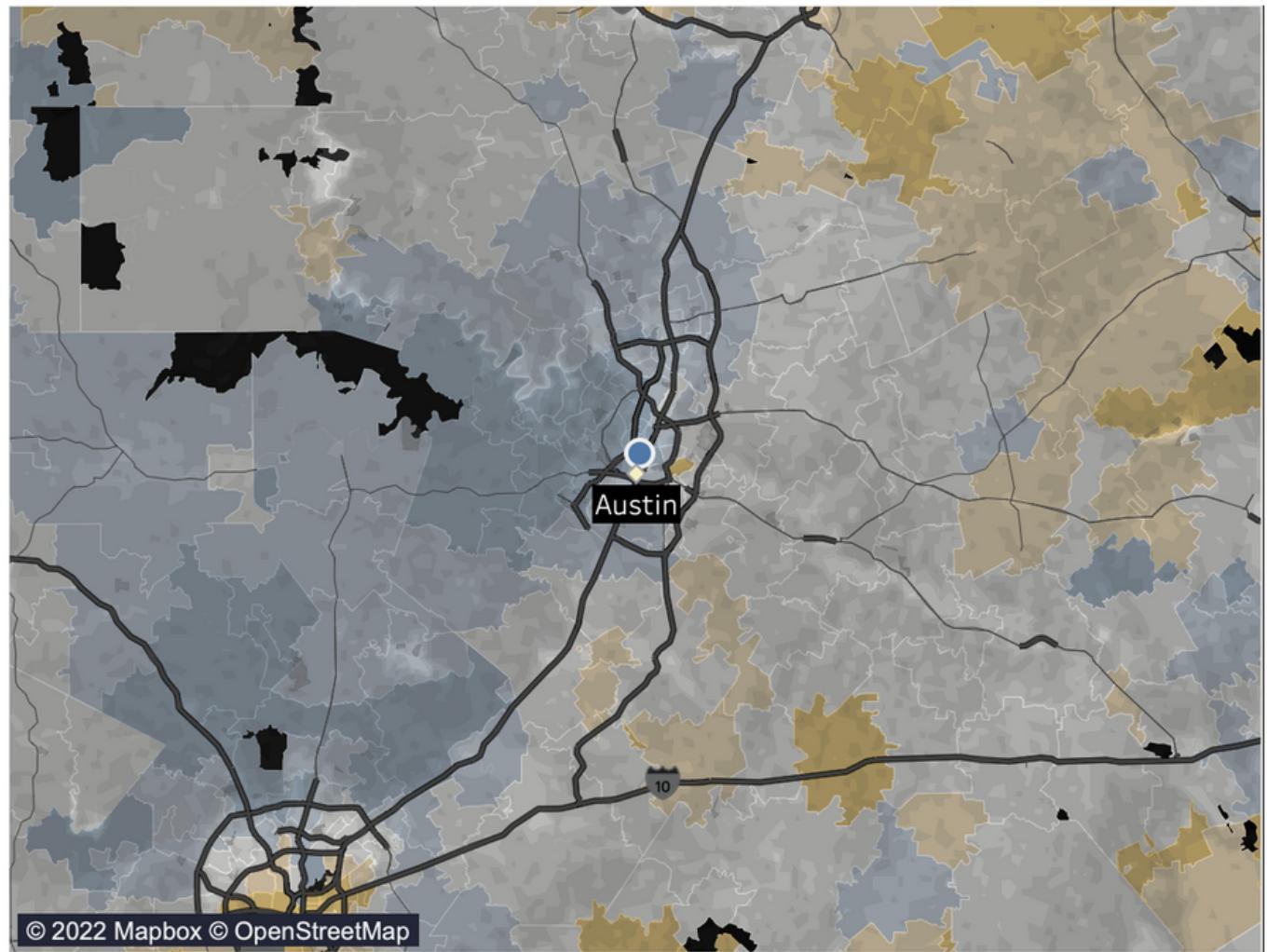


A CLOSER LOOK AT THE TOP 5

Beford, TX (Dallas / Fort Worth Area)



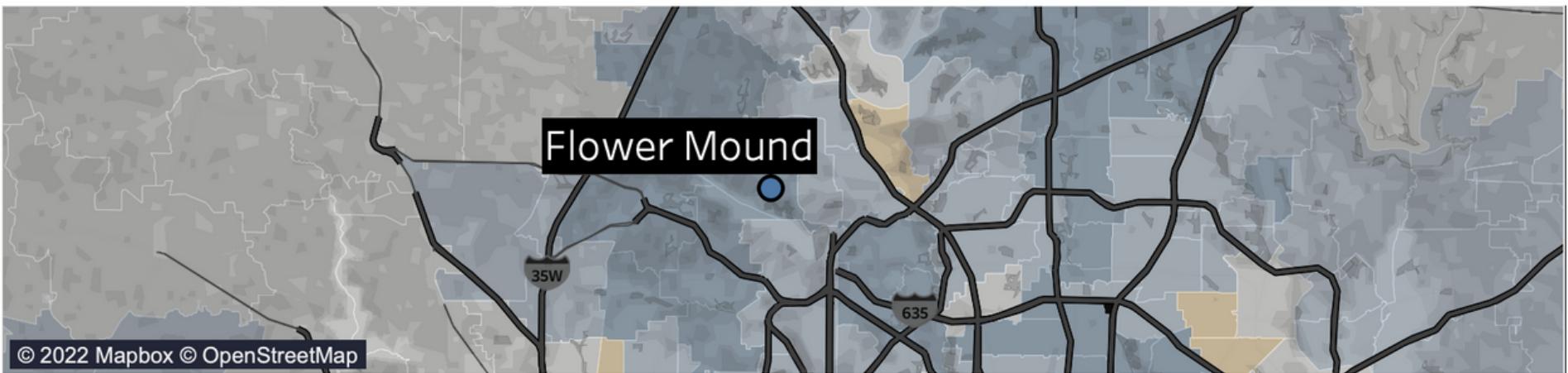
Austin, TX



Georgetown, TX (Austin area)



Flower Mound, TX (Dallas / Fort Worth Area)



Frisco, TX (Dallas / Fort Worth Area)

