

A blurred background image of the Atlanta skyline at sunset, featuring the Bank of America Plaza and other skyscrapers.

# **ATLANTA ZIP CODE ANALYSIS**

## **PROJECT FOR HELLBENT INVESTMENTS**

**SIERRA STANTON, 07/2021**

# SUMMARY

## Overview of Project

We'll use past data gathered on home values across the city of Atlanta to determine **which five ZIP codes** are most likely to bring in the most future ROI for Hellbent.



# OUTLINE

## Table of Contents

- Atlanta Development Problem
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# ATLANTA DEVELOPMENT PROBLEM



- There are over ten ZIP codes across Atlanta, but we can only focus on five
- Hellbent Investments wants to mitigate against potential risks of their development not turning enough profit
- Narrowing our target locations is a must before we get on the ground
- **How do we determine the top 5 best zip codes for us to invest in?**

# DATA ANALYZED

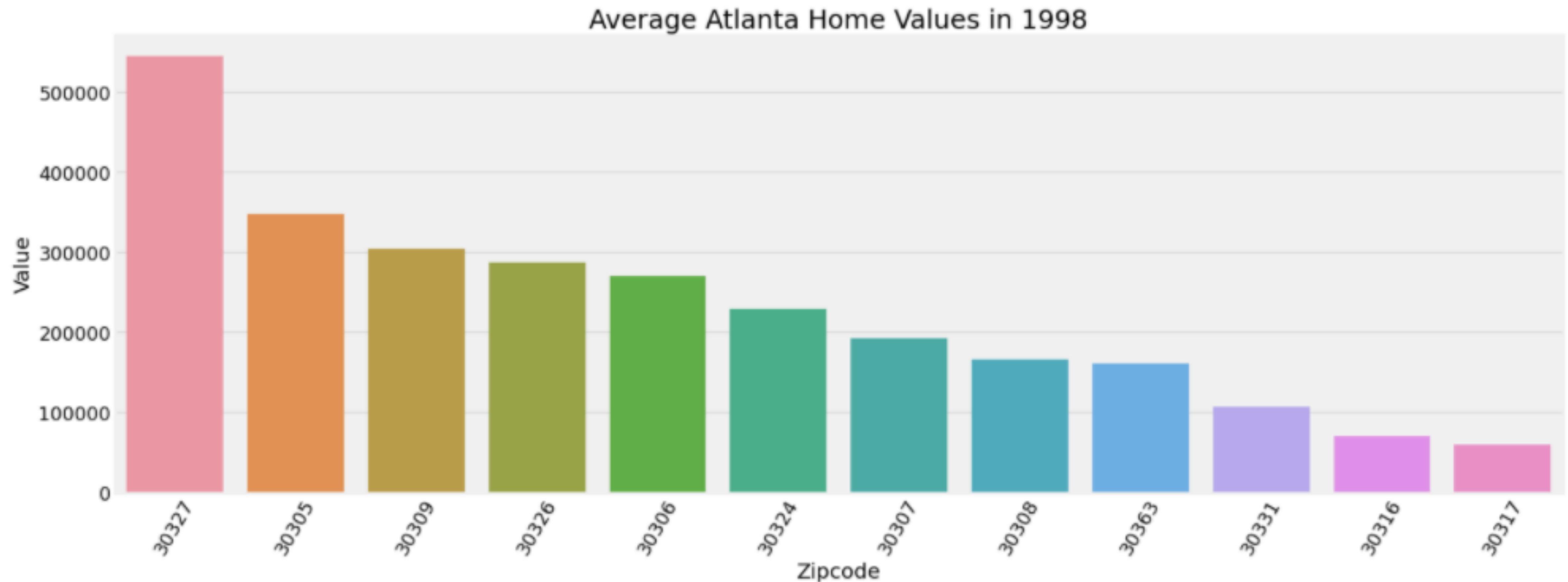
- **Zillow Research's Zillow Data:** this dataset represents over 14,000 ZIP codes across the United States.
  - ZHVI: Zillow Home Value Index
  - Monthly time stamps from 1996-2018
  - Accounting for the Housing Crisis



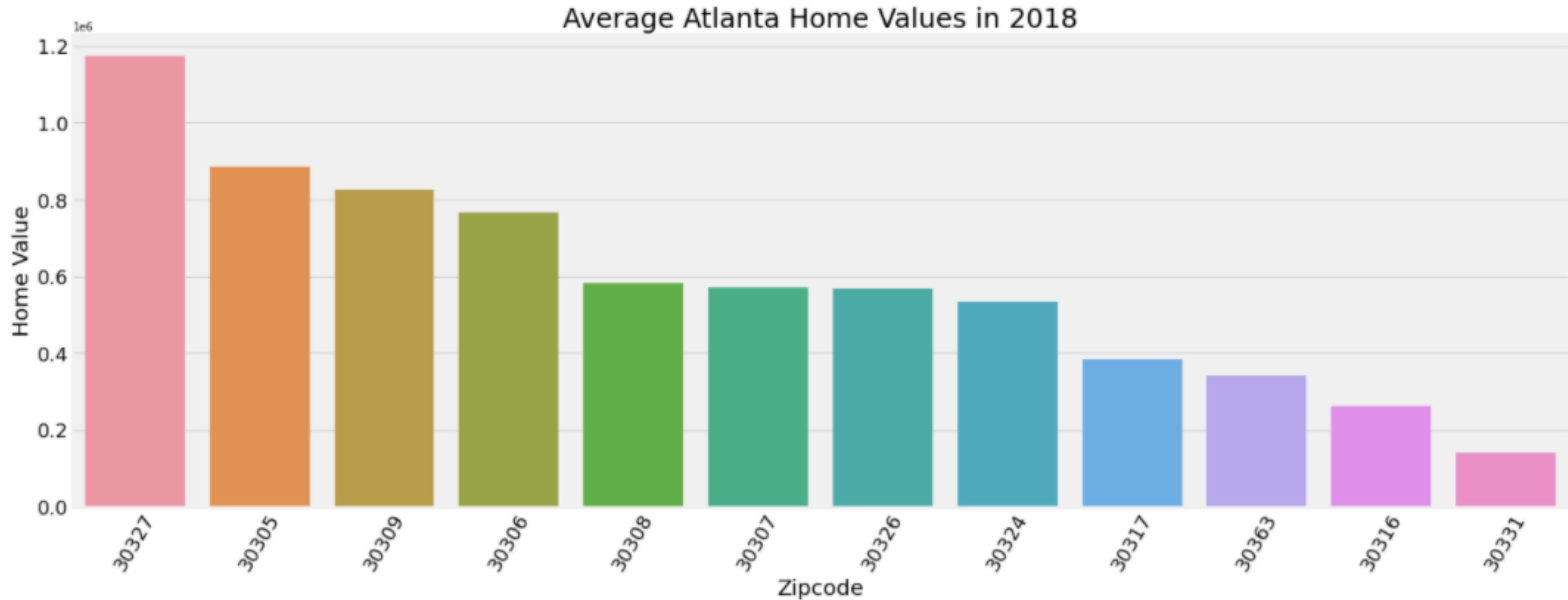
# METHODOLOGY

We cleaned this data and ran multiple model iterations across time-series methods in order to narrow down our target ZIP codes to the few most fitted for Hellbent Investments.

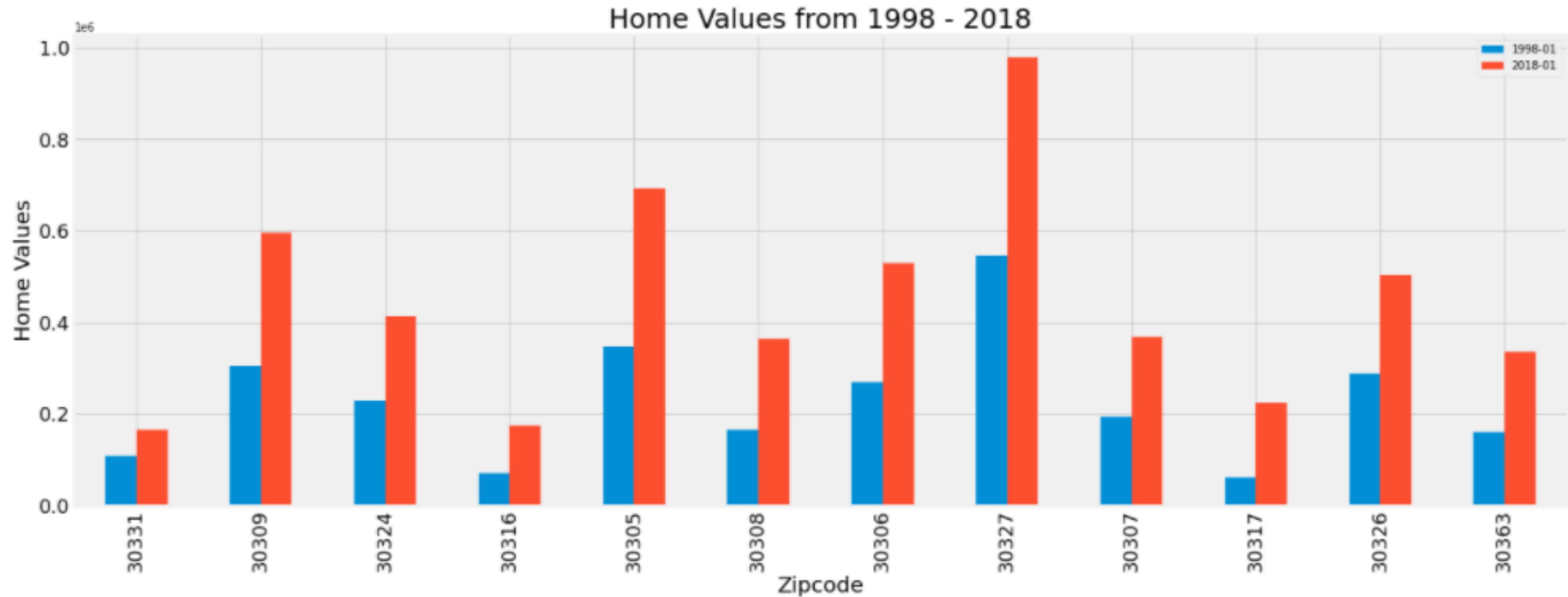
# RESULTS: EXPLORATORY



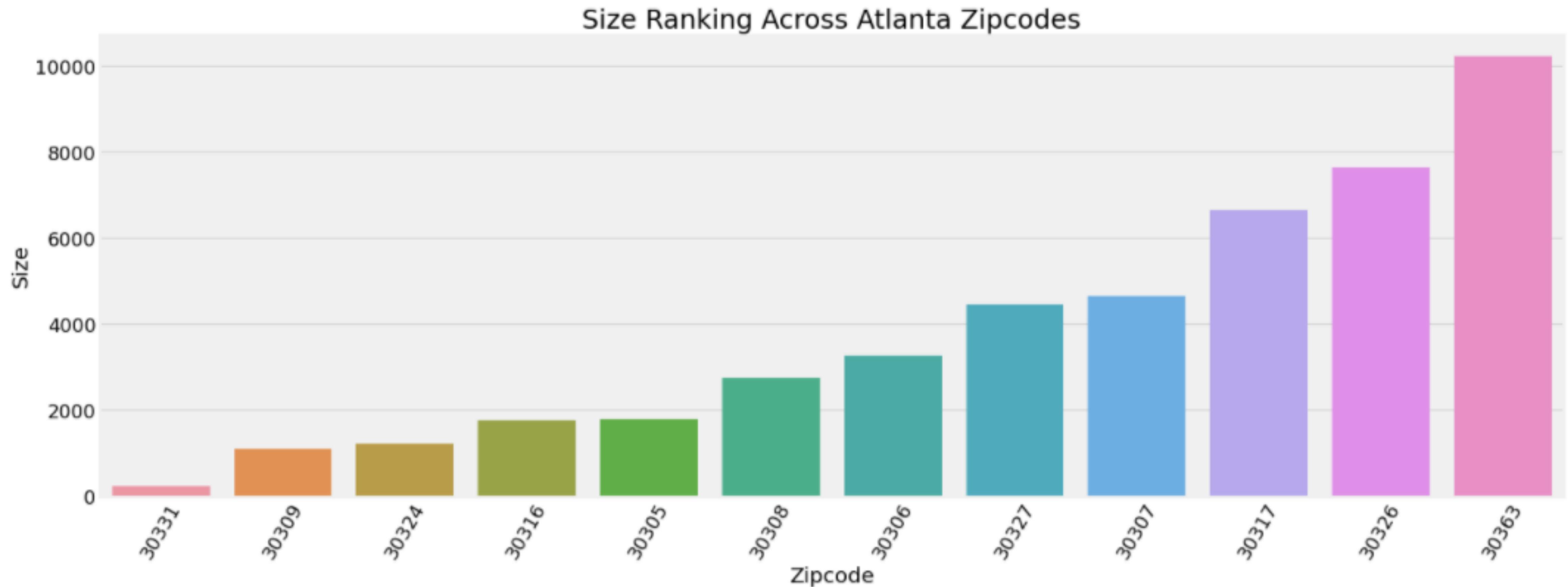
# RESULTS: EXPLORATORY



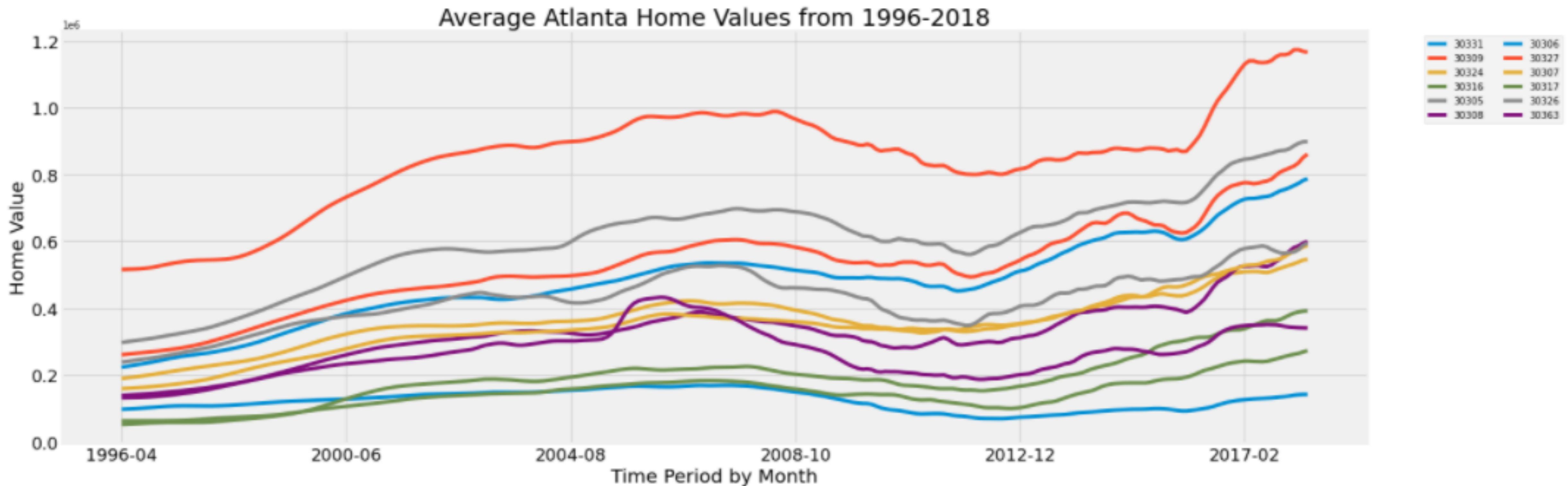
# RESULTS: EXPLORATORY



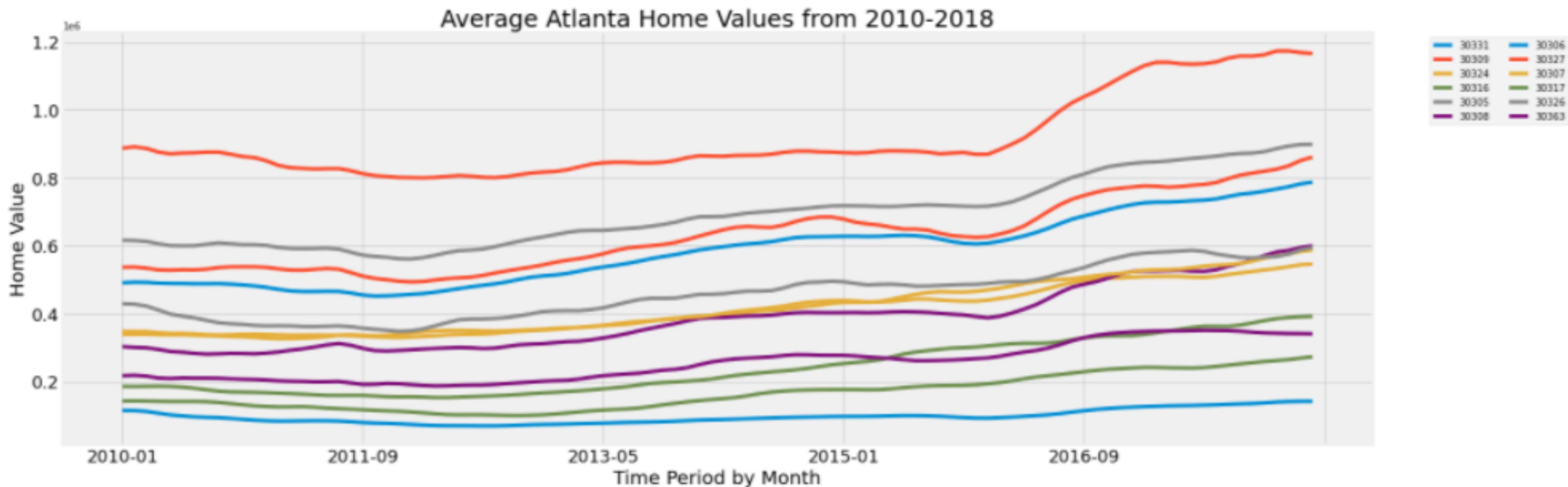
# RESULTS: EXPLORATORY



# RESULTS: EXPLORATORY



# RESULTS: EXPLORATORY





**1st: Forecast Modeling  
2nd: ROI Account: 3 Years Out**

**RESULTS: REIGNING ZIP CODES**

# **CONCLUSION: REIGNING ZIP CODES**

- 1. 30316**
- 2. 30309**
- 3. 30308**
- 4. 30307**
- 5. 30306**

# CONCLUSIONS

While we've determined our initial five targets, we can dig so much deeper!



# Next Steps

- Tying our research further to Hellbent's Real Estate Development Goals
  - Dive deeper into Zillow's metric for value determination through time, and ensure it matches
  - Analyze each ZIP code and create a development project timeline and/or metric to ensure we're abreast of current development saturation - and how such past developments have affected housing values in Atlanta
- Compare our results had we added in the 08' crisis or used different time splits, bringing in over a decade more of training data to improve our models
- Map ROI past a three year horizon

# THANK YOU!

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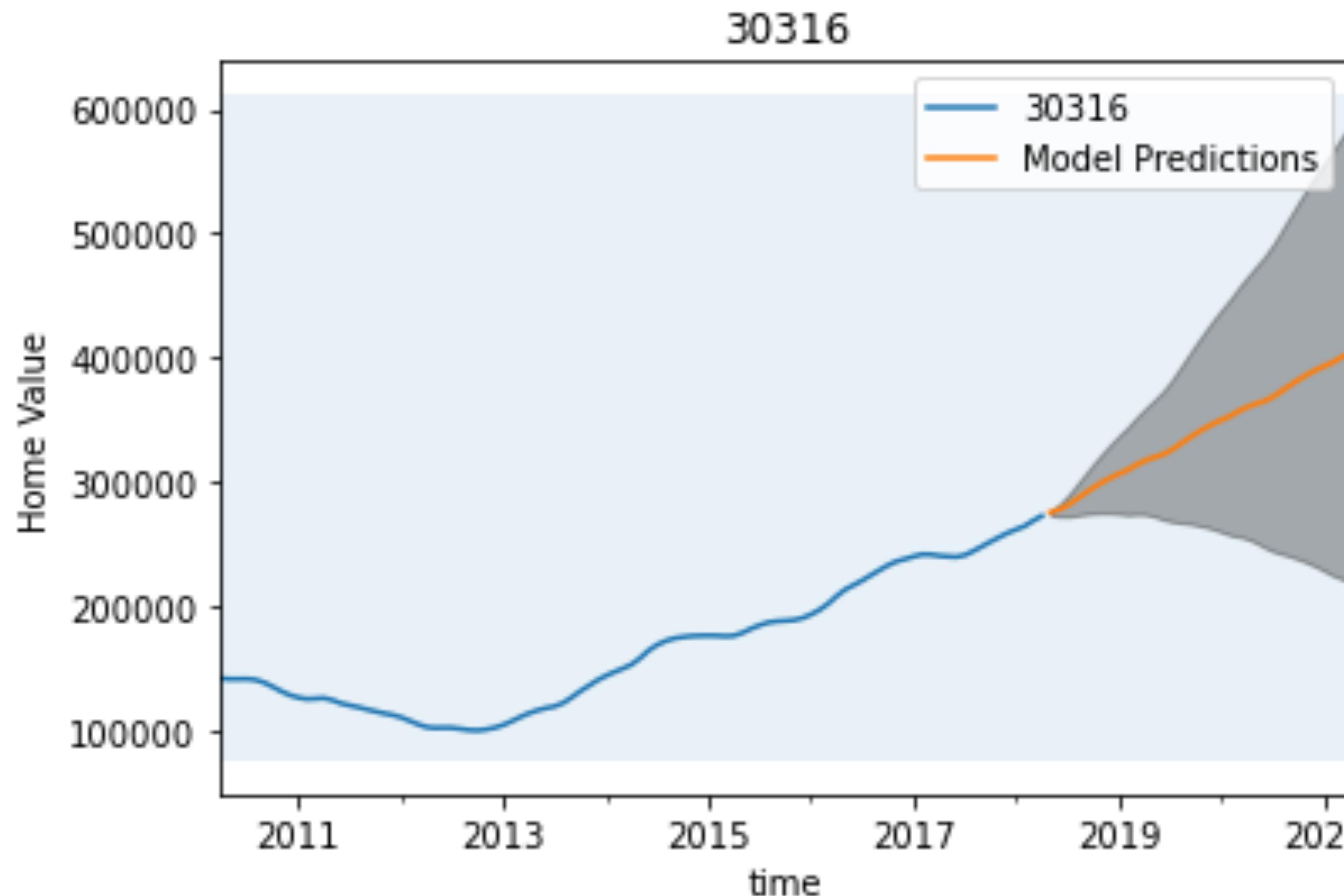
# APPENDIX

- ROI Breakdown
- Model Forecasting Across Target ZIP Codes

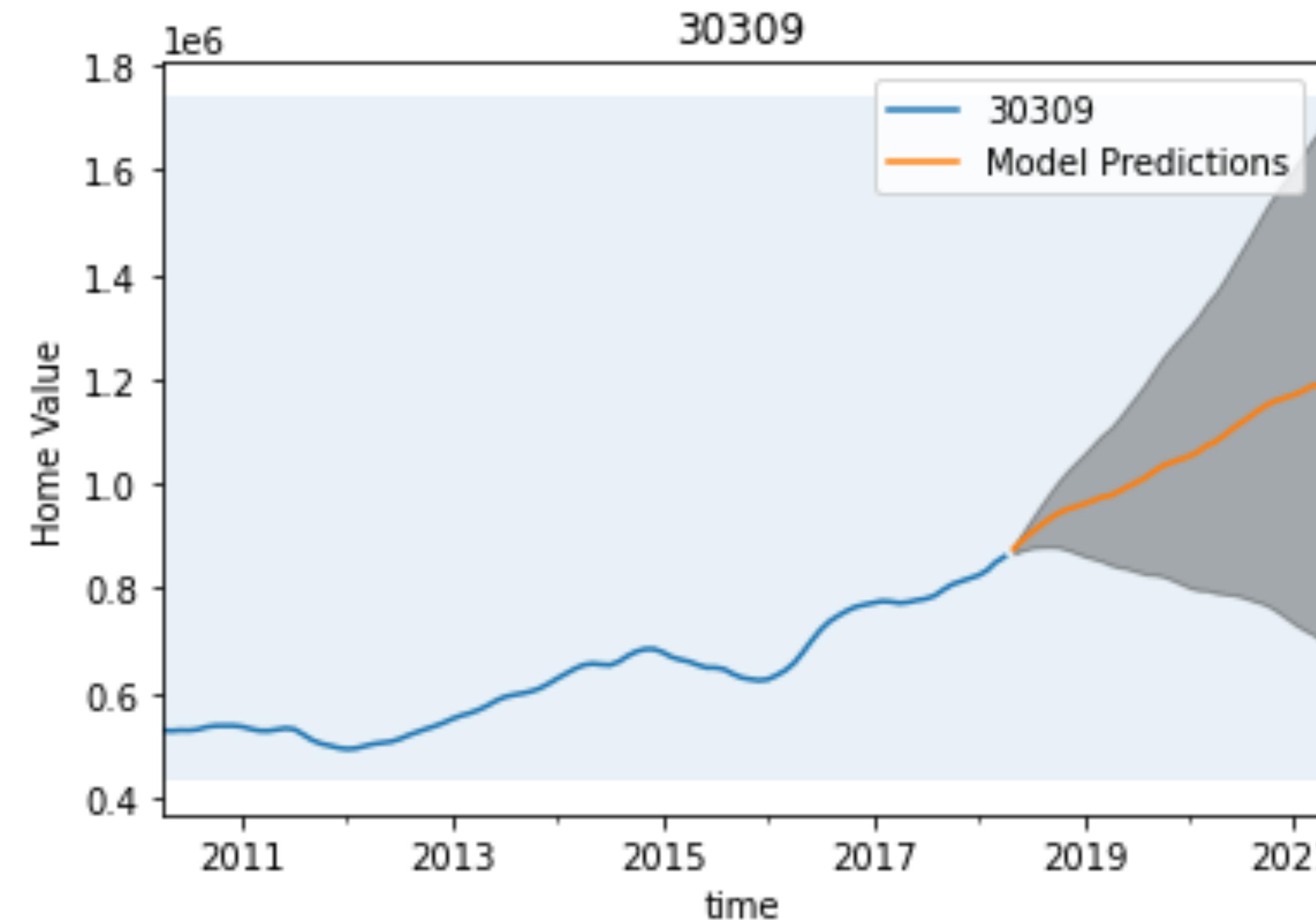
# RESULTS: REIGNING ZIP CODES

	<b>Zipcode</b>	<b>Current Value</b>	<b>3 Year Forecast</b>	<b>Lower Expectation</b>	<b>Upper Expectation</b>	<b>ROI</b>	<b>ROI-Lower</b>	<b>ROI-Upper</b>
<b>5</b>	30316	272500.0	4.034072e+05	219247.249280	5.875671e+05	48.039338	-0.195423	1.156210
<b>4</b>	30309	860700.0	1.191338e+06	702015.530661	1.680660e+06	38.414970	-0.184367	0.952666
<b>3</b>	30308	599300.0	8.098513e+05	244728.238434	1.374974e+06	35.132867	-0.591643	1.294301
<b>2</b>	30307	587100.0	7.596463e+05	578600.965211	9.406916e+05	29.389587	-0.014476	0.602268
<b>1</b>	30306	787000.0	1.004930e+06	551752.286721	1.458107e+06	27.691210	-0.298917	0.852741

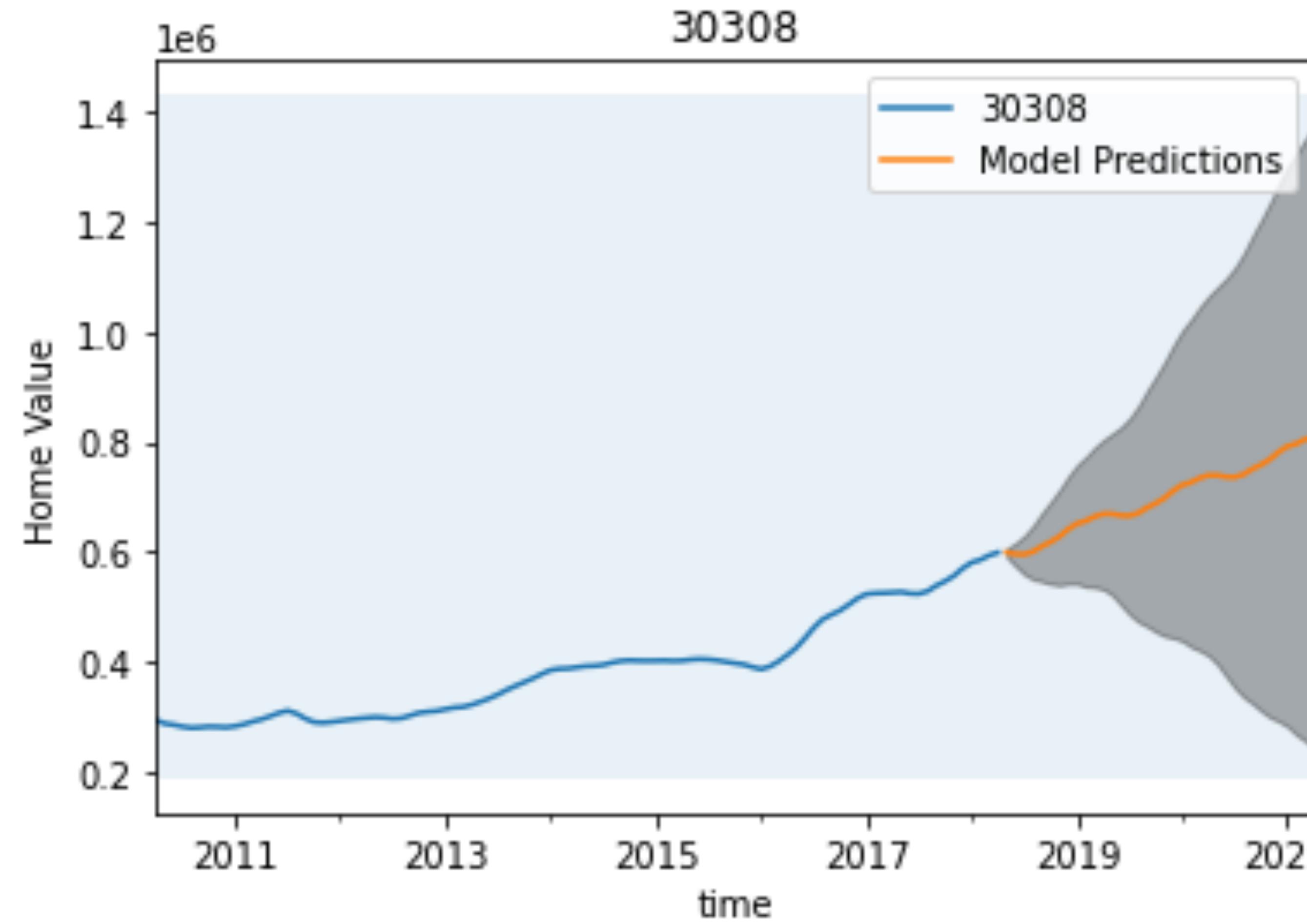
# RESULTS: MODEL ANALYSIS



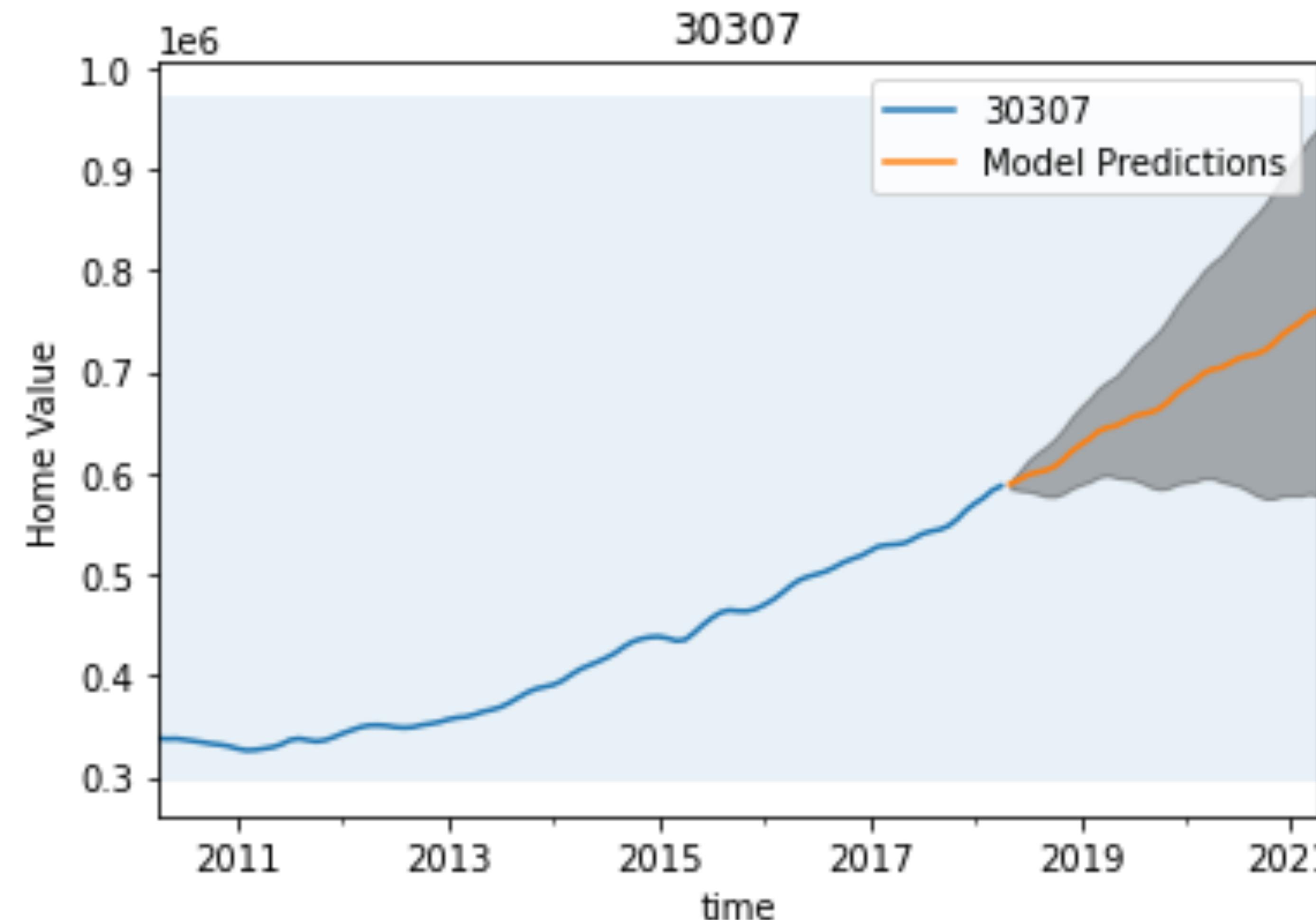
# RESULTS: MODEL ANALYSIS



# RESULTS: MODEL ANALYSIS



# RESULTS: MODEL ANALYSIS



# RESULTS: MODEL ANALYSIS

