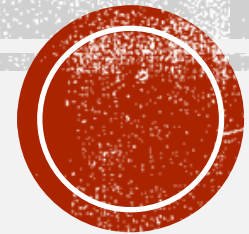


# **TIME SERIES MODELING FOR HARRIS COUNTY HOUSE MARKET**

Linh Mai

Presented August 20<sup>th</sup>, 2020



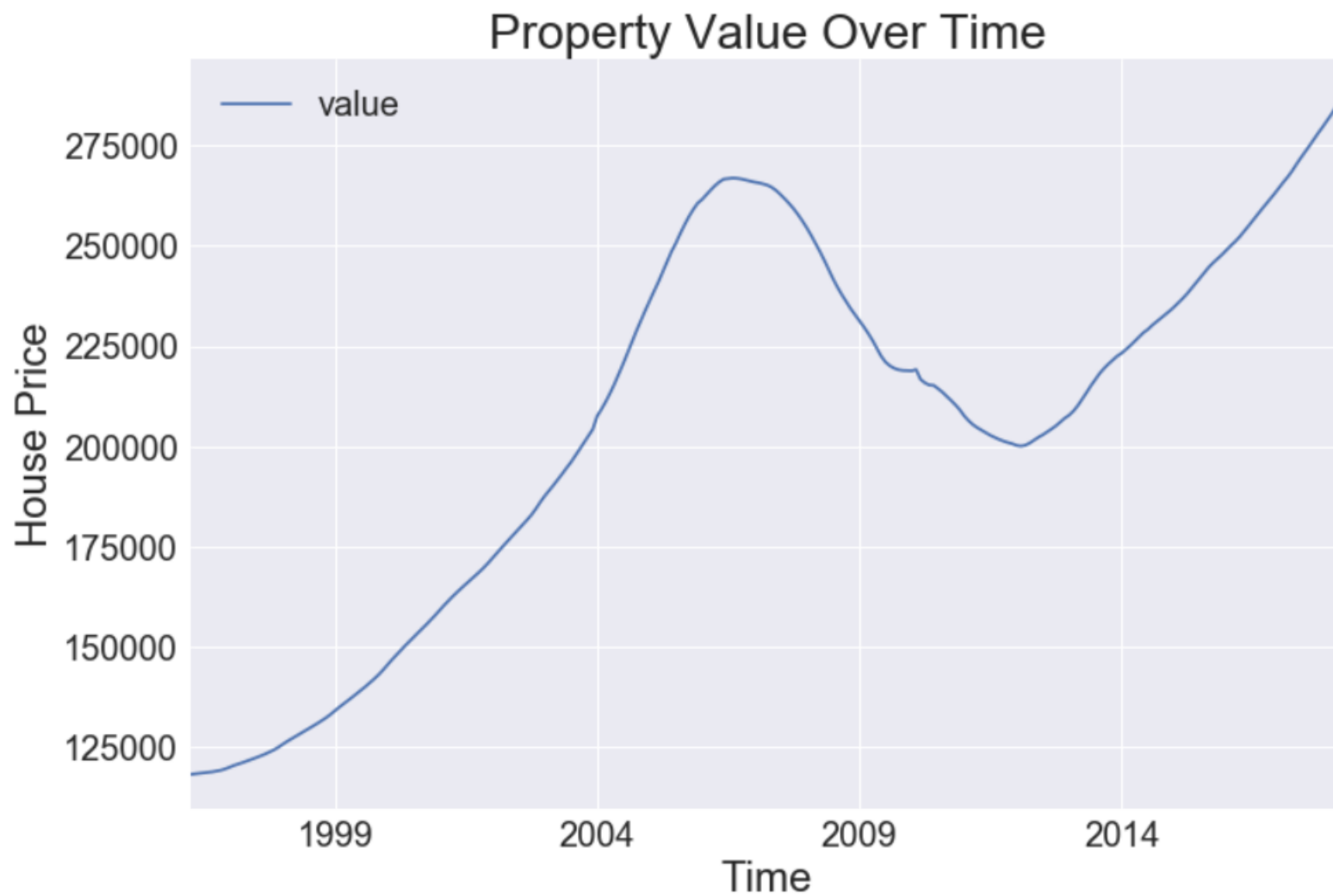
# OBJECTIVES

- **Top 5 zip codes in Harris County for real estate investment**
- **3-year forecast based on house market data of 20+ years**
- **Evaluation of top models is based on the Return On Investment (ROI) yield**

# OVERVIEW

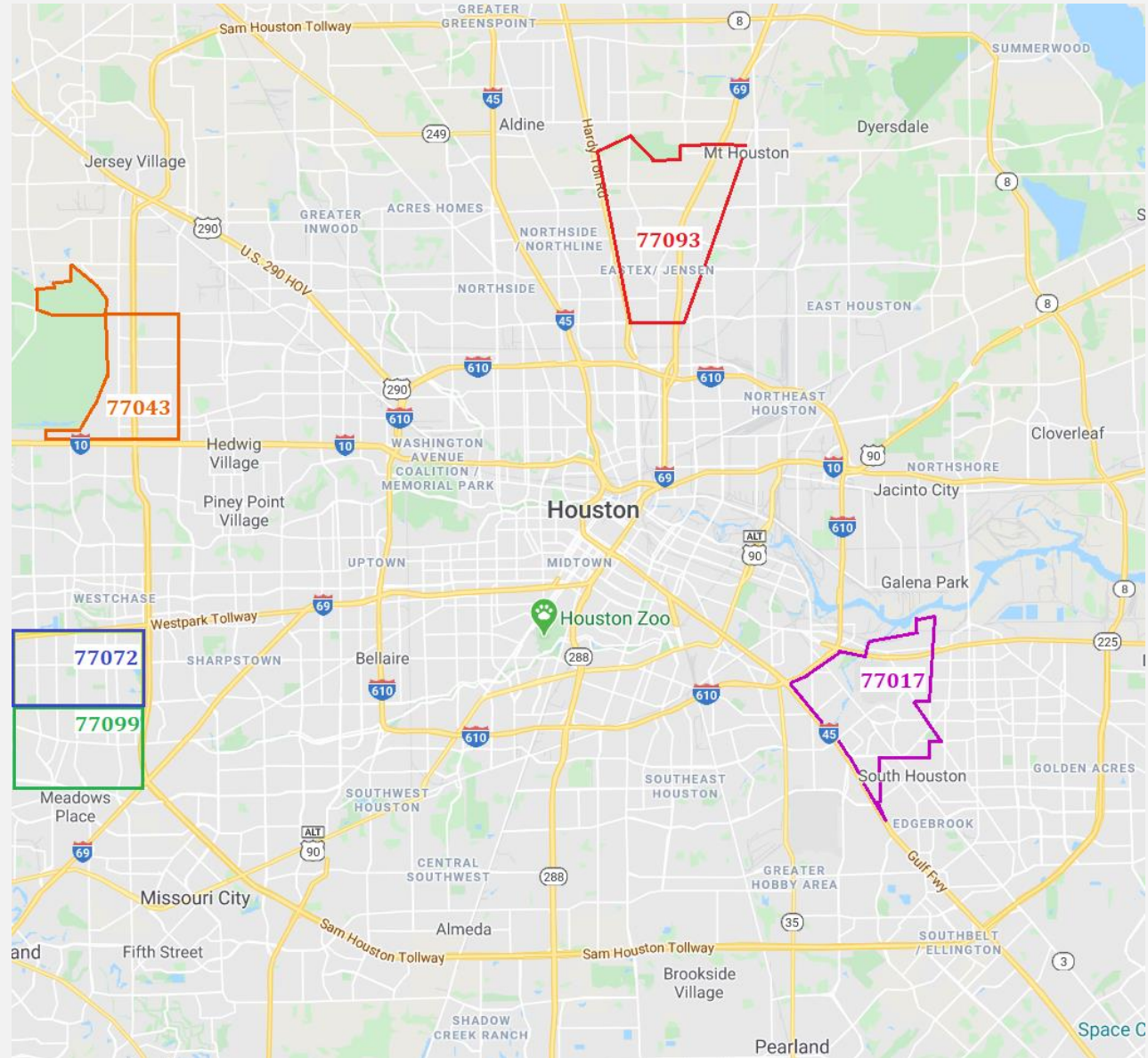
- **Real estate price data from Zillow Research Page – an American online real estate database company**
- **Overall data: 15,000 zip codes**
- **Limit to Harris County, Texas: 121 zip codes**

# AVERAGE OVERALL TREND

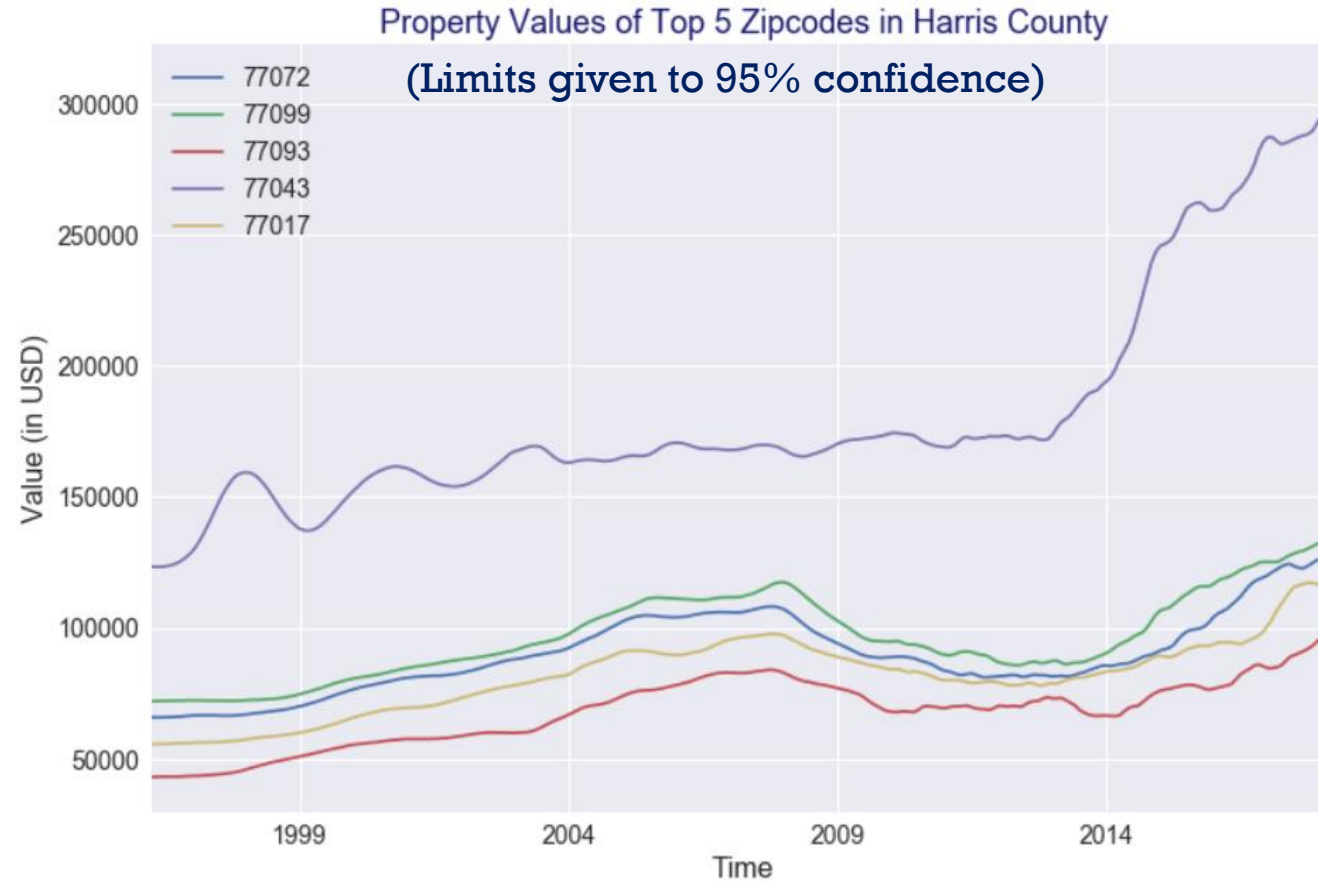




# RECOMMENDATIONS



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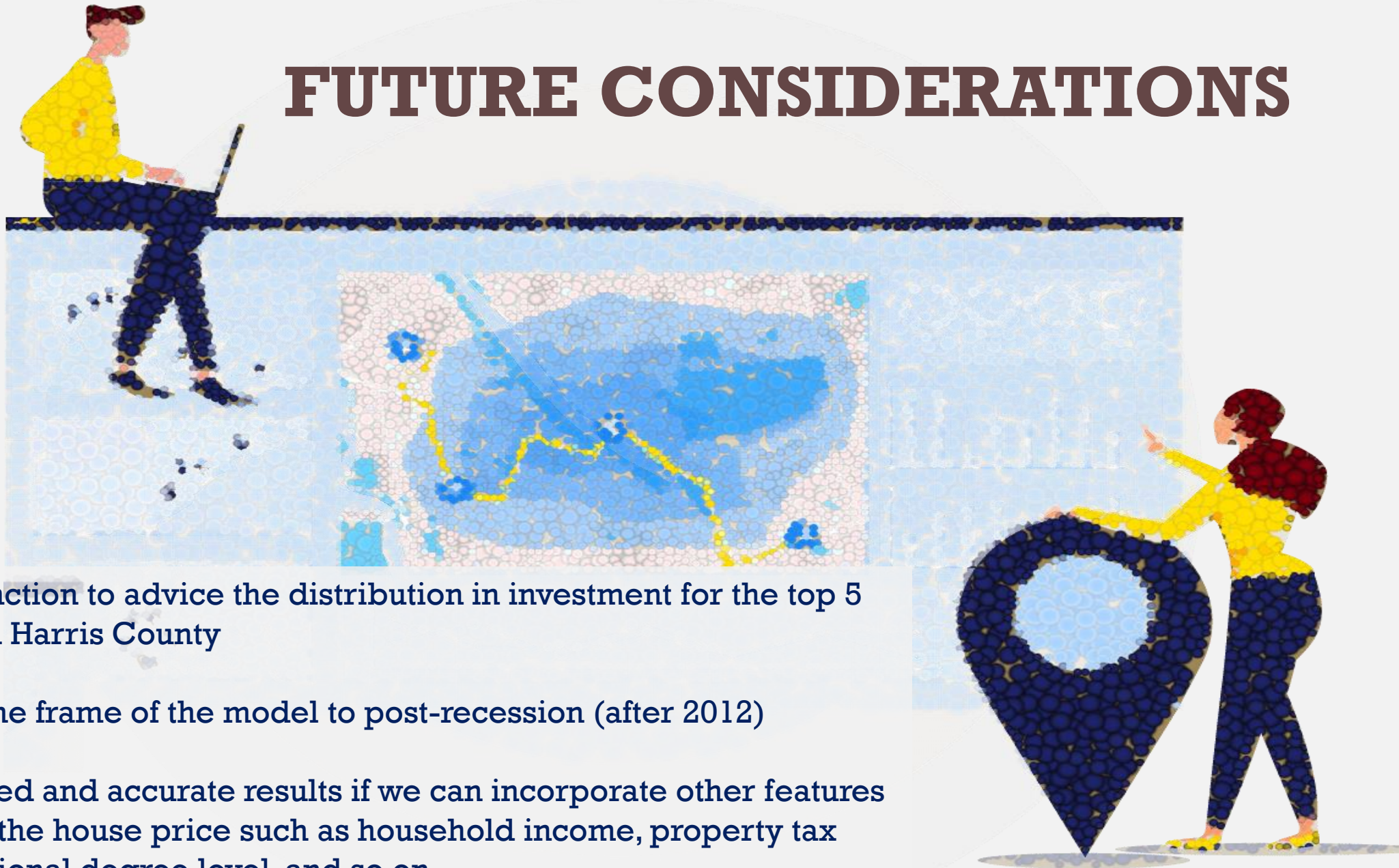


ZIP	HOUSE PRICE	AVERAGE ROI	HIGHEST ROI	LOWEST ROI
77072	130K	19.31%	33.07%	5.54%
77099	140K	22.38%	36.67%	8.10%
77093	100K	26.95%	41.65%	12.25%
77043	310K	19.31%	34.76%	3.86%
77017	125K	19.12%	244.34%	5.63%



# FUTURE CONSIDERATIONS

- Create a function to advice the distribution in investment for the top 5 zip codes in Harris County
- Limit the time frame of the model to post-recession (after 2012)
- More detailed and accurate results if we can incorporate other features that impact the house price such as household income, property tax rate, educational degree level, and so on



THANK YOU