



Predicting Housing Prices

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Goals

- Create Interactive map
- Use zillows data to predict
- Use city data and census data to add information

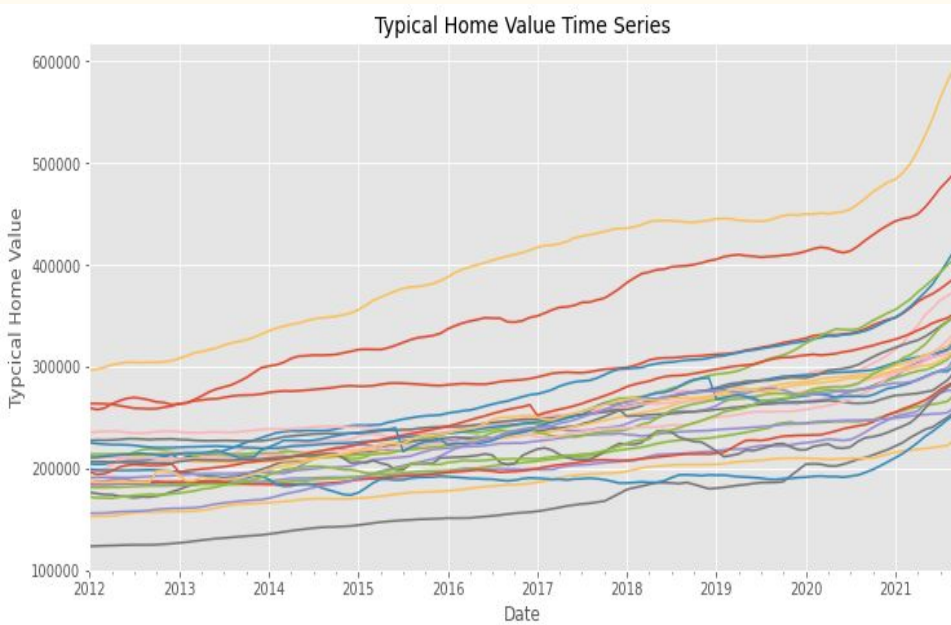
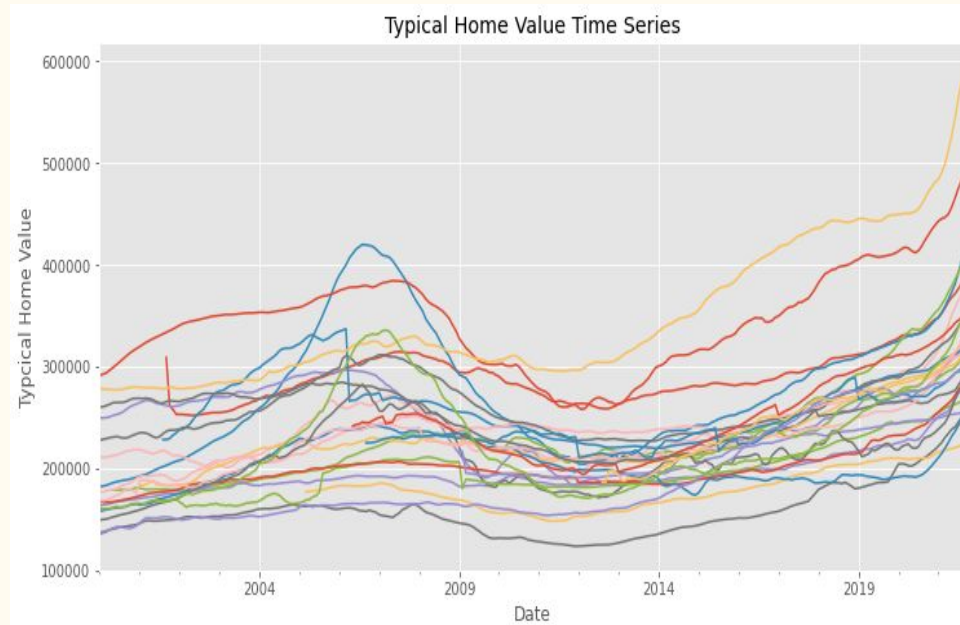
An aerial photograph of a suburban neighborhood. The houses are densely packed, many with swimming pools in their backyards. The streets are visible, and there are some larger commercial buildings in the upper left corner. The overall scene is a typical suburban residential area.

Overview and data

- For this portion I focused on a predictive time series
- I used the Zillow Home Index Value
 - Main aspect is the Zestimate
- Data dates from 2000 to 2021

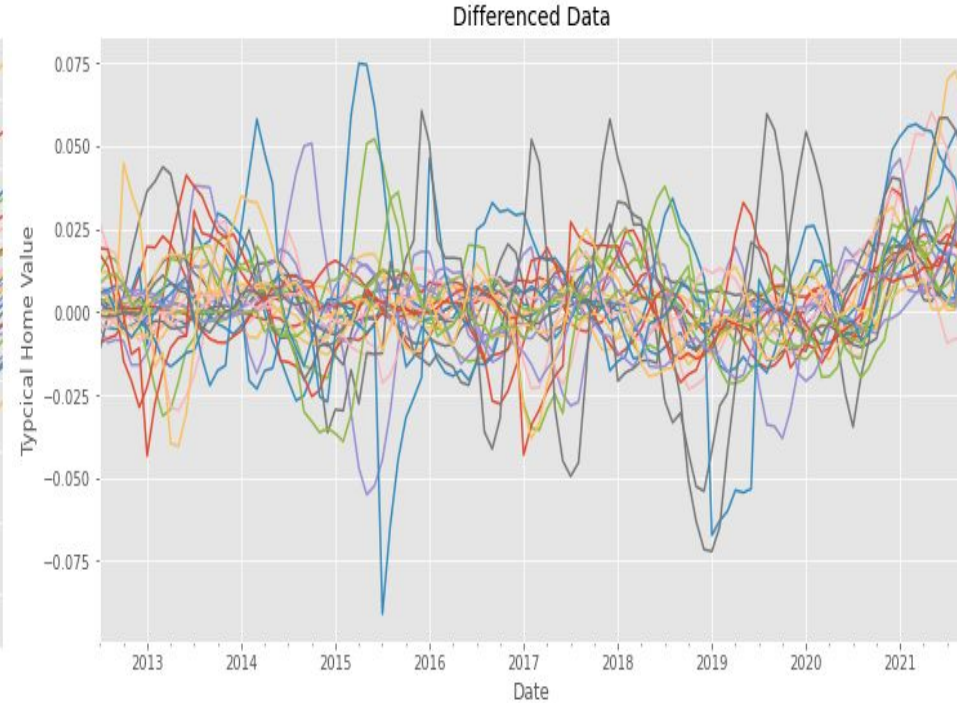
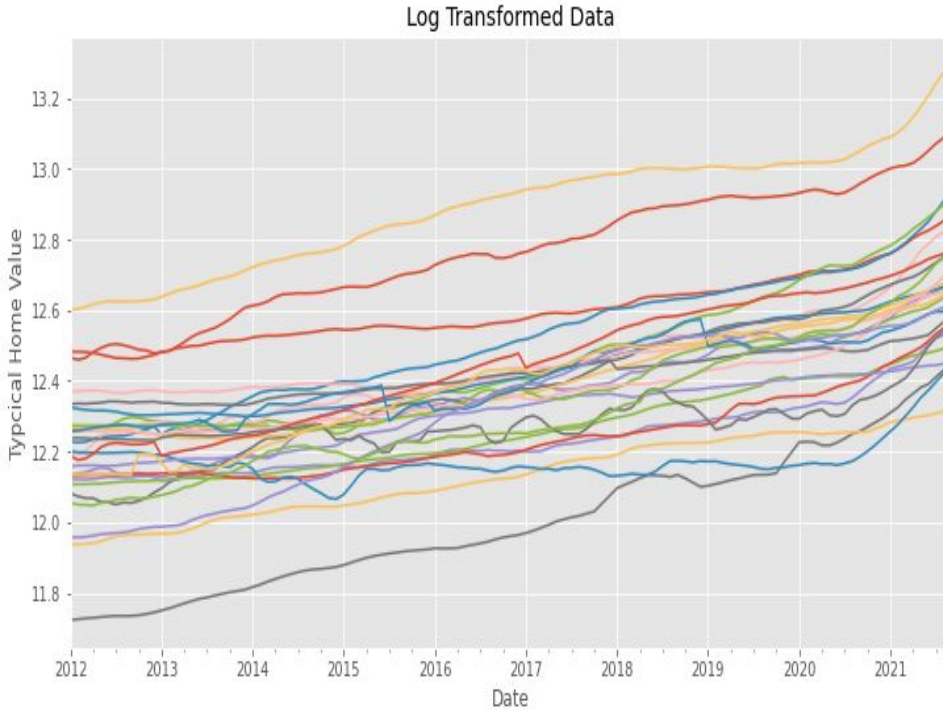
Methods

- Took data away prior to the US housing bubble
- Filtered down to 27 counties for sake of time



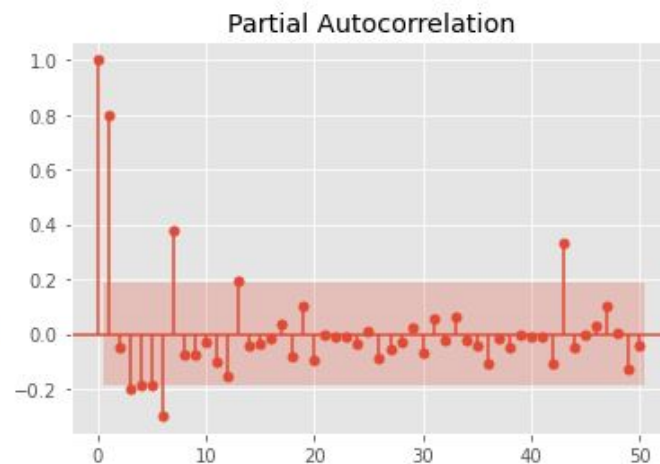
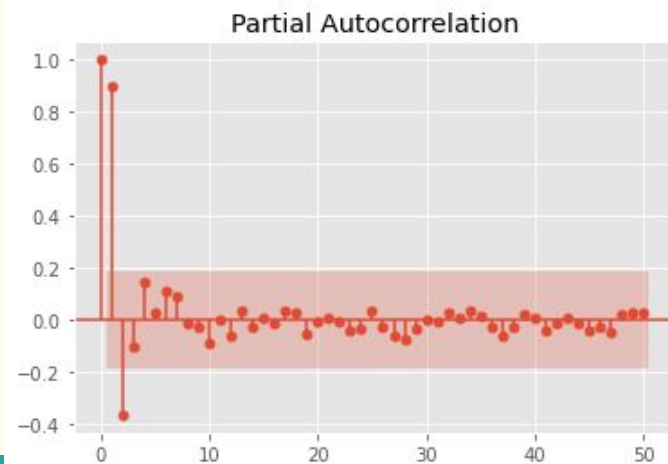
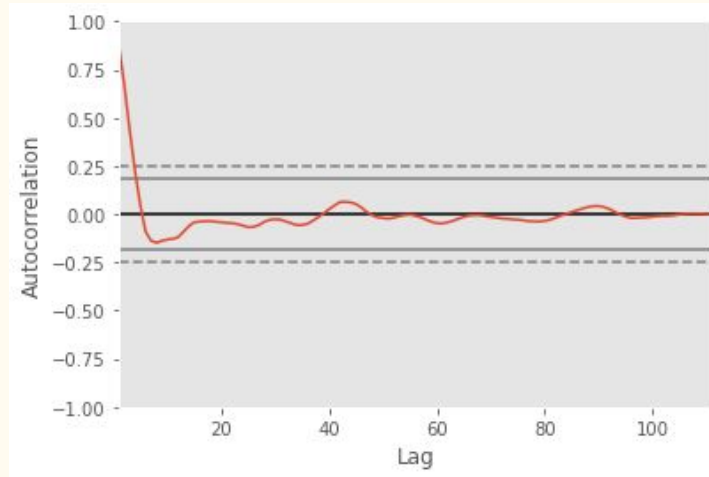
Methods

- Logged the data
- Subtracted the rolling mean and differenced the data



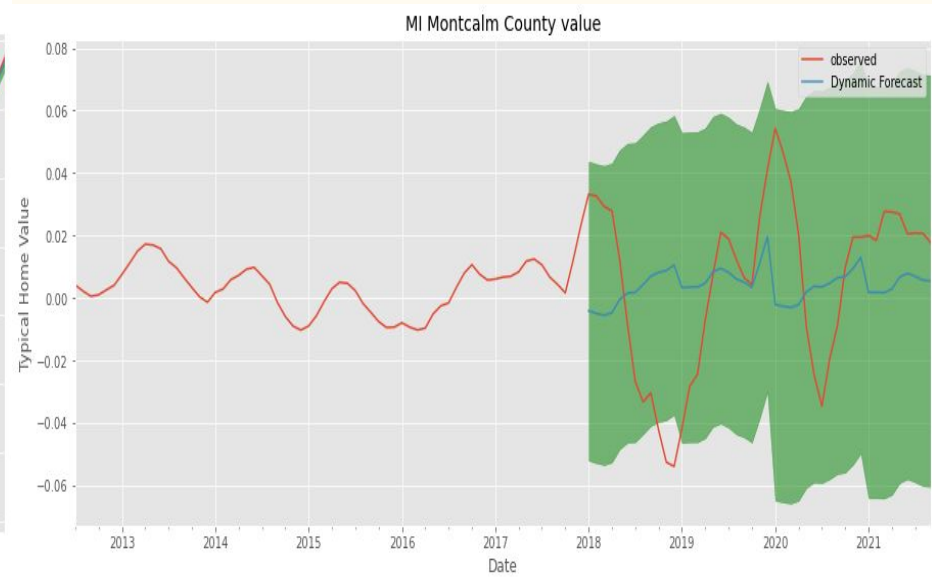
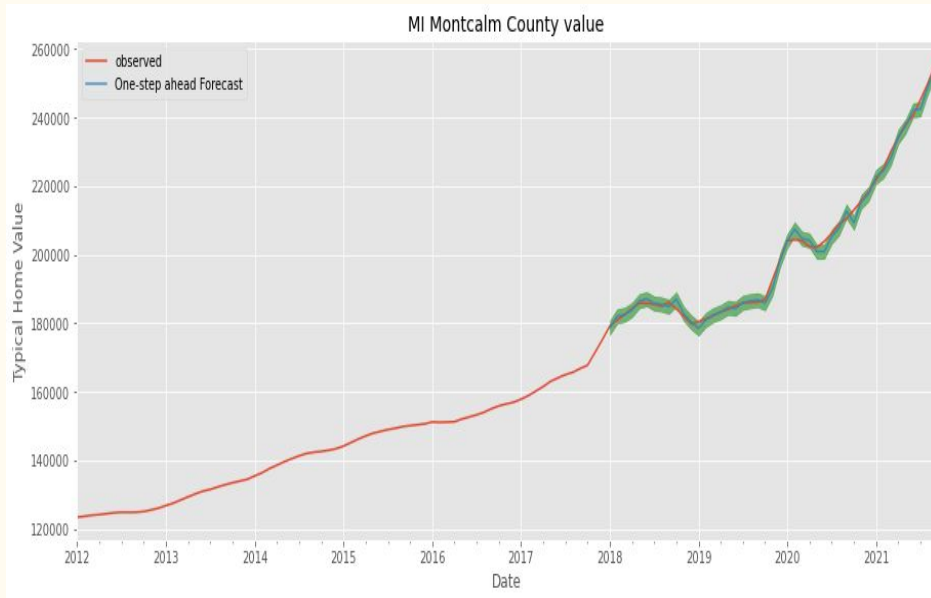
Methods

- Autocorrelation looks great
- Most partial autocorrelations look great
- Some models didn't perform as well



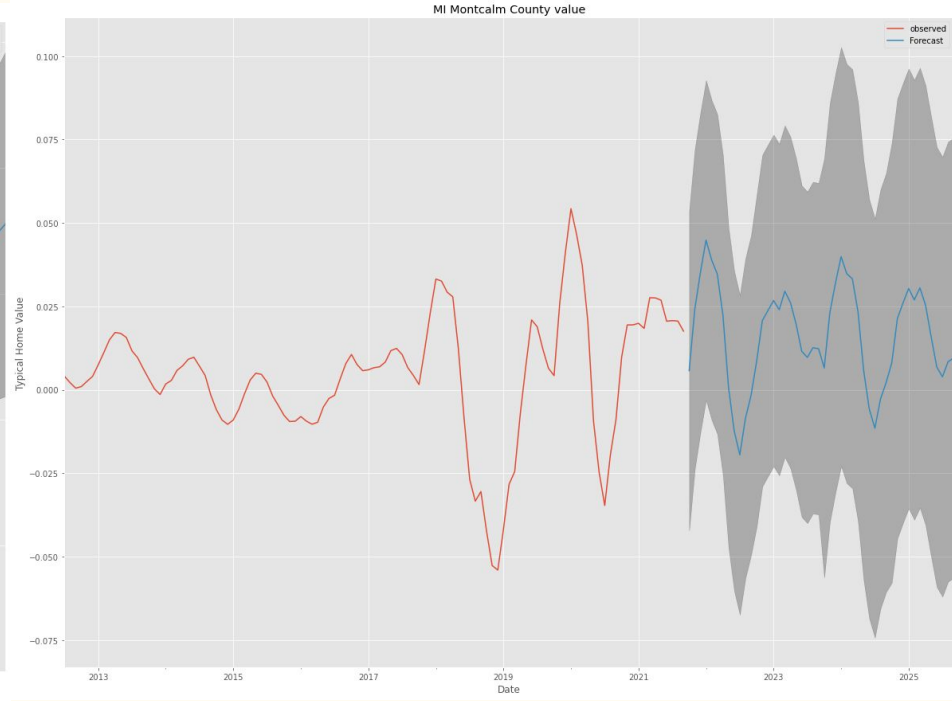
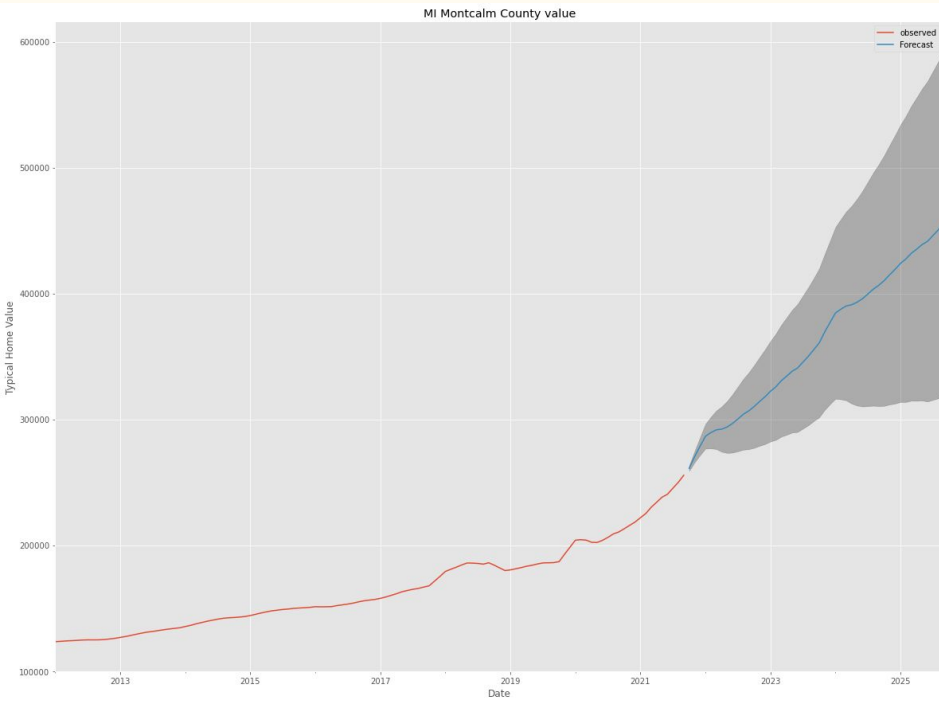
Validating Methods

- Used original data and processed
- Different scales



Results

- Forecasted into the next four years
- Use these for goals



Next Steps

- Better optimize individual models
- Apply methods to rest of counties
- Build map with filtering tool
- Pull data in real time

Thank you

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