
Top zipcodes to invest in: executive presentation

Selecting the top states

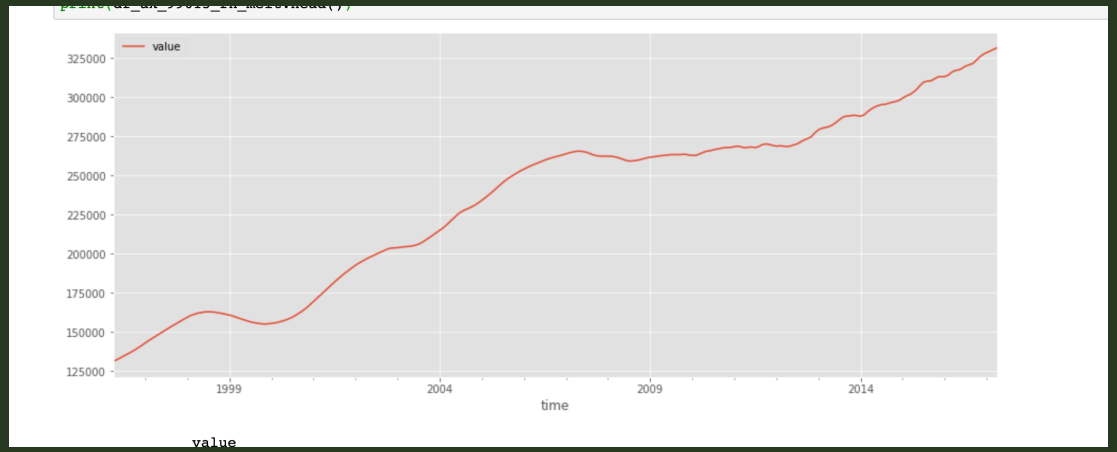
- Group dataframe by state and find the mean value for each state
- Select the values for the most recent year and five years before that
- Subtract the value five years ago from most recent value and divide by the initial value to identify the states with the highest price increase

Selecting the top zipcodes

- The states with the highest gain are VT, CT, and AK
- Create separate dataframes for each state
- Apply the formula to each state to find the top zipcodes for each state and create a list of three
- Create a dataframe through each zipcode using by filtering for ‘RegionName’

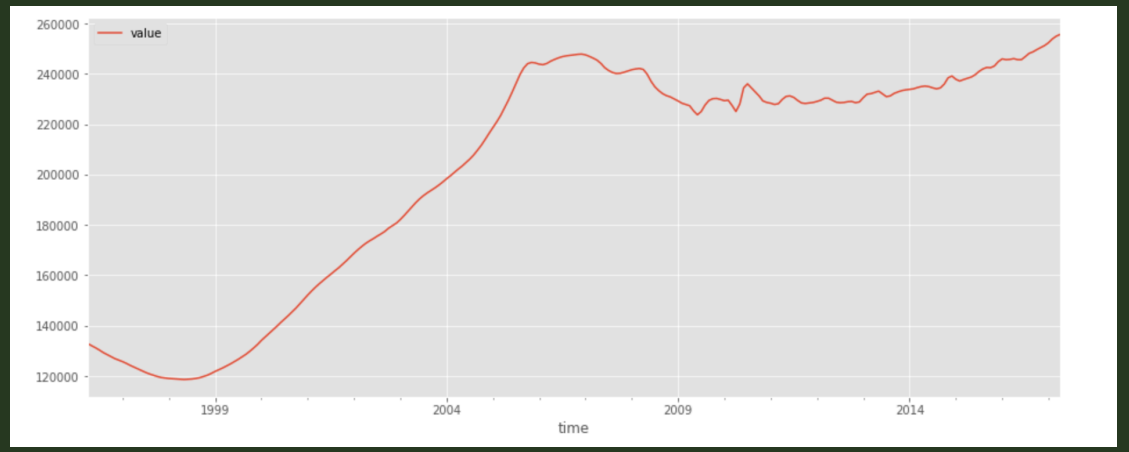
Visualization: the values over time for each zipcode

AK

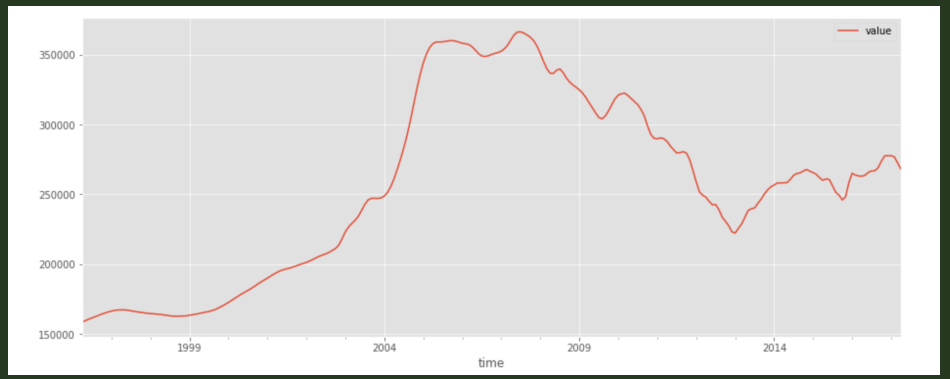


value

VT



CT

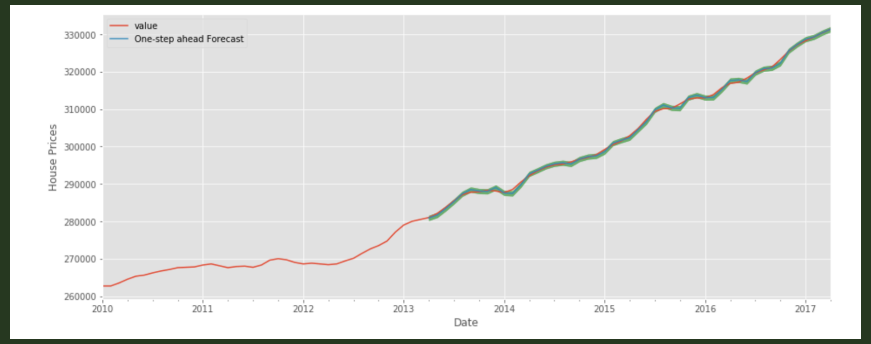


Modeling: AK

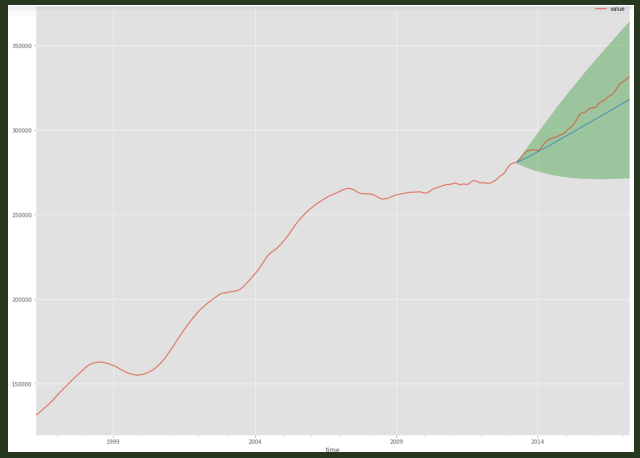
- Parameters that minimize the AIC value are:

```
pdq           (1, 1, 1)
pdqs     (1, 1, 1, 12)
aic            3319.22
Name: 63, dtype: object
```

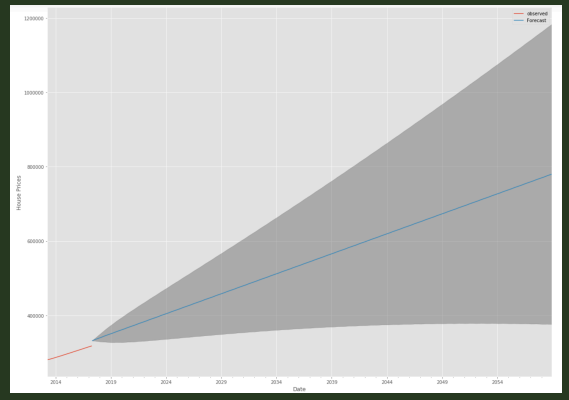
- One-step ahead forecasting



Dynamic predictions with confidence intervals



Future predictions with confidence intervals: 500 steps ahead



Summary and future work

- Include more metrics to assess whether the zipcodes are good to invest in, such as variance in prices
- Look at the data further back in the historical period to assess trends for risk better
- The top states are AK, VT, and CT and the top zipcodes are the highest return zipcodes in those states

Thank you!

Alex Tyryshkin

styrysh@gmail.com