Title: Housing Price Prediction Engine
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Abstract:

Professors Steven Hanke, Robert Schiller, and others have written about the “18 year” housing cycle. The prize in prediction accuracy belongs to professor Fred Foldvary, who wrote in 1997: “the next major bust, 18 years after the 1990 downturn, will be around 2008, if there is no major interruption such as a global war.”

Some contributors to housing prices are measurable; these include; inventory availability, interest rates, credit availability, and other macroeconomic indicators such as GDP, CPI, energy costs, and unemployment rate. Low inventory raises prices, high interest rates lower prices, consumers are less likely to buy homes during recessions, etc. … Other contributors to housing prices are less easily quantified. These are “sentiment indicators” and they have to do with market momentum and consumer sentiment.

Our product will take as inputs: zipcode or msa identifier, and yield a pricing prediction of a meidan house price in the geographic area. Our aggregation pipeline will produce a unified dataset which will drive our prediction engine.
Our model will make the prediction based on existing feature values, I.E. interest rates, unemployment rate, listing time on market, as stored in the dataset. However, it will also accept overrides so that a user may ascertain what a home value would look like under a different set of conditions, I.E. higher interest rates, lower unemployment etc. …

Datasets:
1. Realtor.com:
   https://www.realtor.com/research/data/
2. U.S. Bureau of Labor Statistics:
   https://www.bls.gov/
3. Federal Reserve Datasets:
   https://fred.stlouisfed.org/docs/api/fred/
4. Zillow Datasets:
   https://www.zillow.com/research/data/
6. Fannie Mae Loan Performance Datasets
   https://datadynamics.fanniemae.com/data-dynamics
7. Trading Economics Existing Home Sales:
   https://tradingeconomics.com/
8.