



Mortgage Default Debt Collection in Iowa

Eric Yoo
Aug 24, 2018



Some Facts...

- U.S. mortgage debt rose to \$8.8 trillion in mortgage loans in 2018
- Lenders repossessed 65,413 U.S. properties through foreclosure (REO) in Q1 2018
- In the first quarter, 189,870 properties started the foreclosure process – a 4% increase over the fourth quarter of 2017.
- 1 in 776 properties in Iowa started the foreclosure process during the first quarter of 2018
- The foreclosure rate in the state is up 19.55% from the end of 2017

Source -

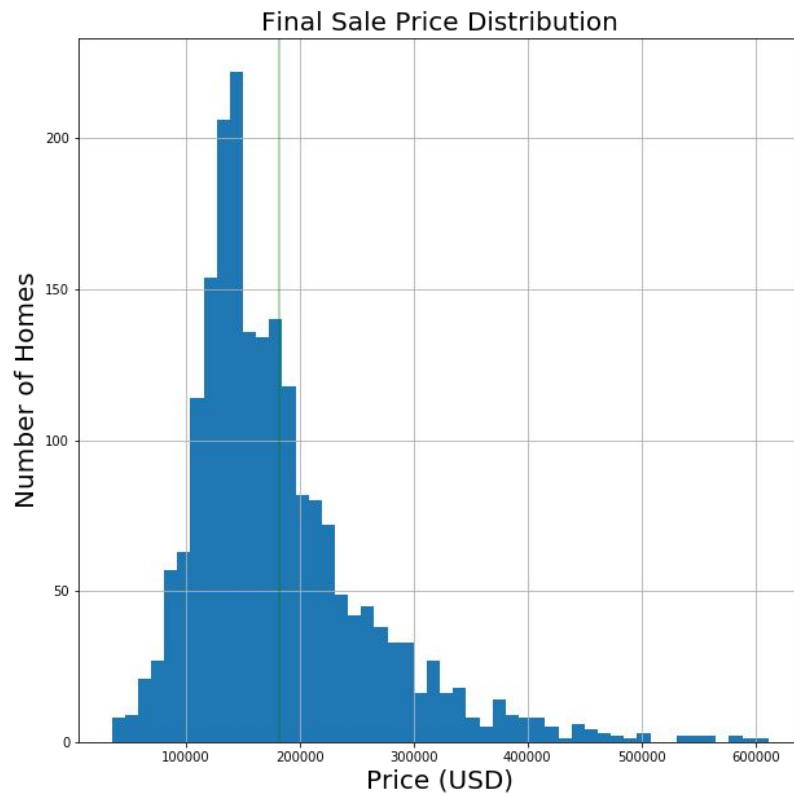
1. [Iowa Business Daily](#)
2. [Marketplace.org](#)
3. [Atom Data](#)



This brings us to our question...

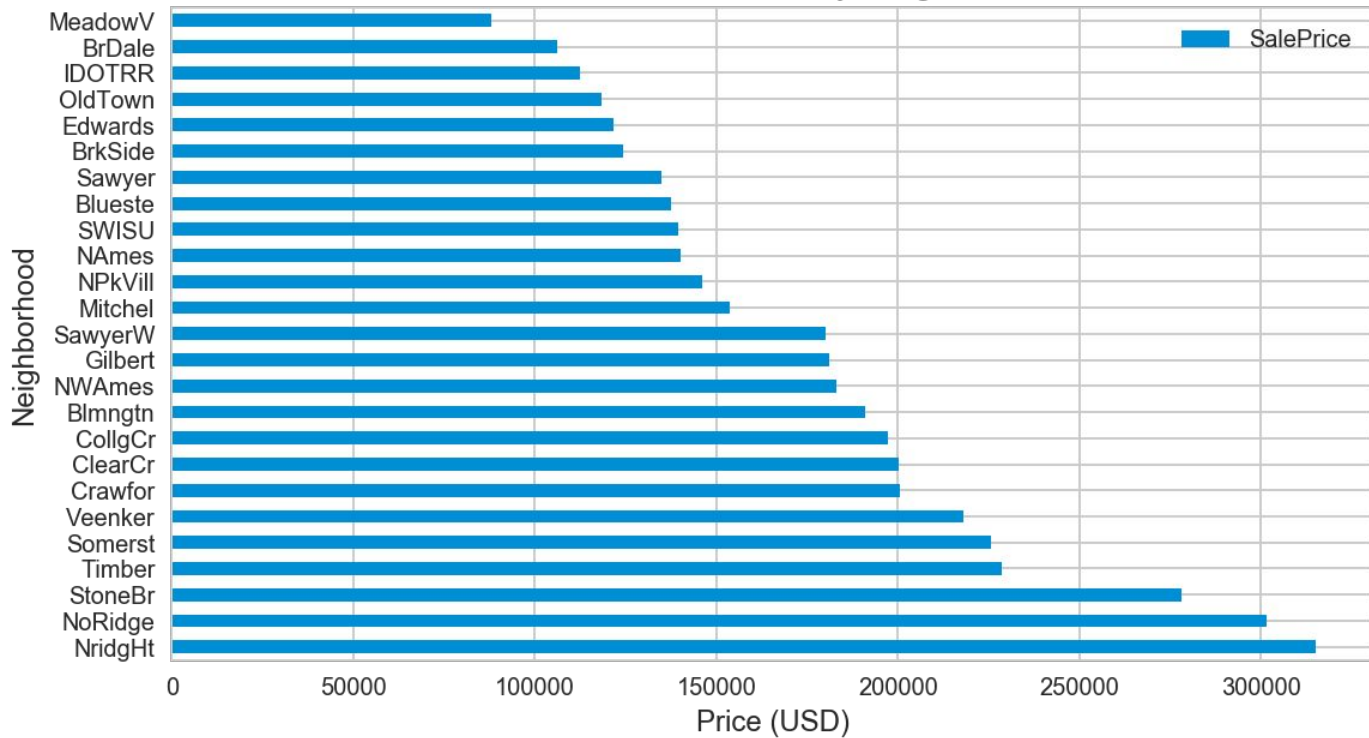
Can we use housing data from Ames, Iowa to predict auction selling prices?

- Is it possible to accurately identify an approximation of what houses in default will sell for based on the features and conditions?
- What are these features?
- Can we determine if the debts should be sold to third party debt collectors to mitigate the banks' losses?
- What are the features that contribute most to the selling price





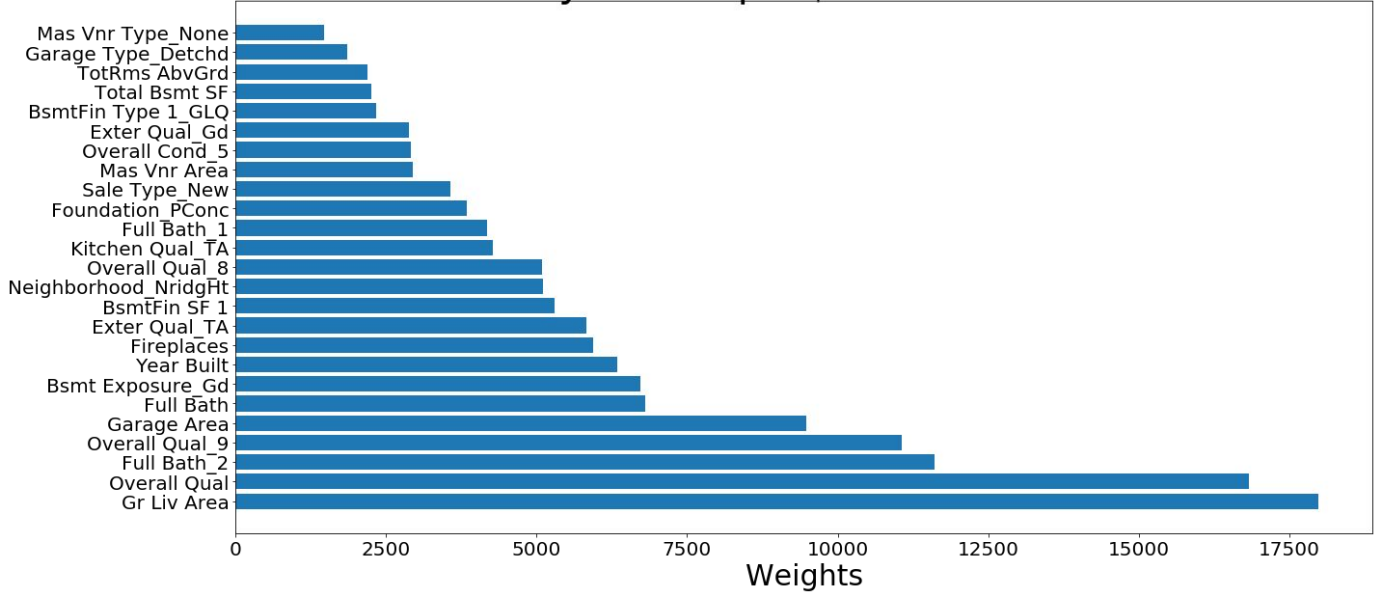
Median Price of Home by Neighborhood

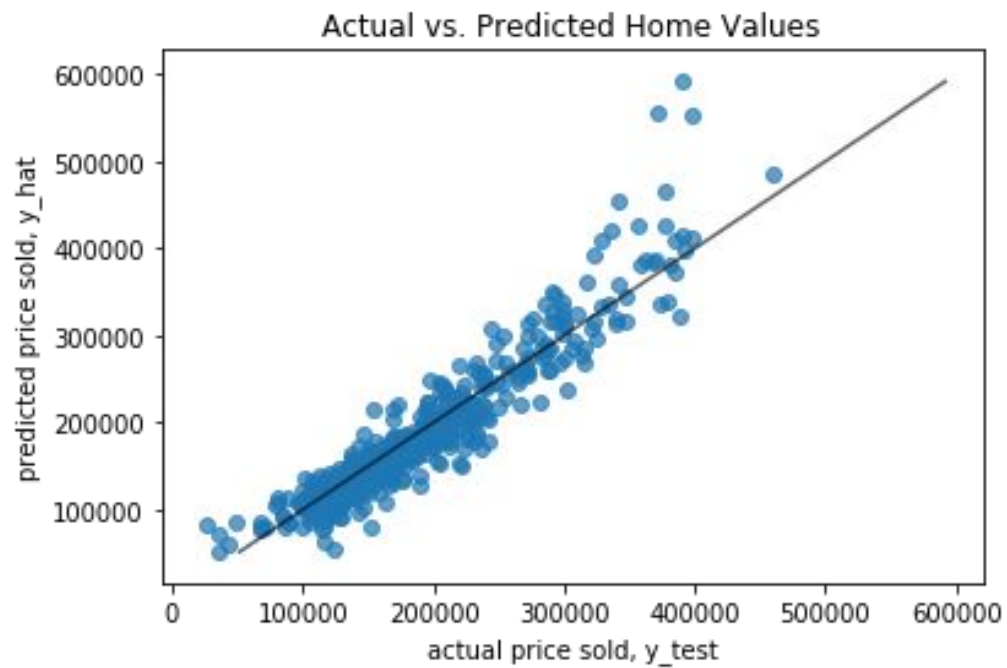




Most Important Features and Weights

y intercept: \$180730.78







In Summary:

- There **are** traits/features of houses that can be used to predict pricing when weighed against each other
- The following features will provide the most confidence in predicting that the modeled price is accurate:
 - Above Ground Living Area
 - Overall Quality
- This predictive modeling will need to be weighed against the amount of debt on the loan and the selling price of the debt.
- Although this information is based on the housing prices from Ames, Iowa, the model can be improved with more information/regional data.



Methodologies

- The model was created by assessing the