



What Makes a House Valuable?

Conclusions from the Ames, IA
Housing Dataset from 2006-2010

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Table of Contents

- Goals
- How We Compared Models
- Our Model's Accuracy
- Factors Influencing House Price
- Positive Features for House Price
- Features Unrelated to House Price
- Negative Features for House Price
- What to Change About a House
- Additional Data to Generalize Our Findings

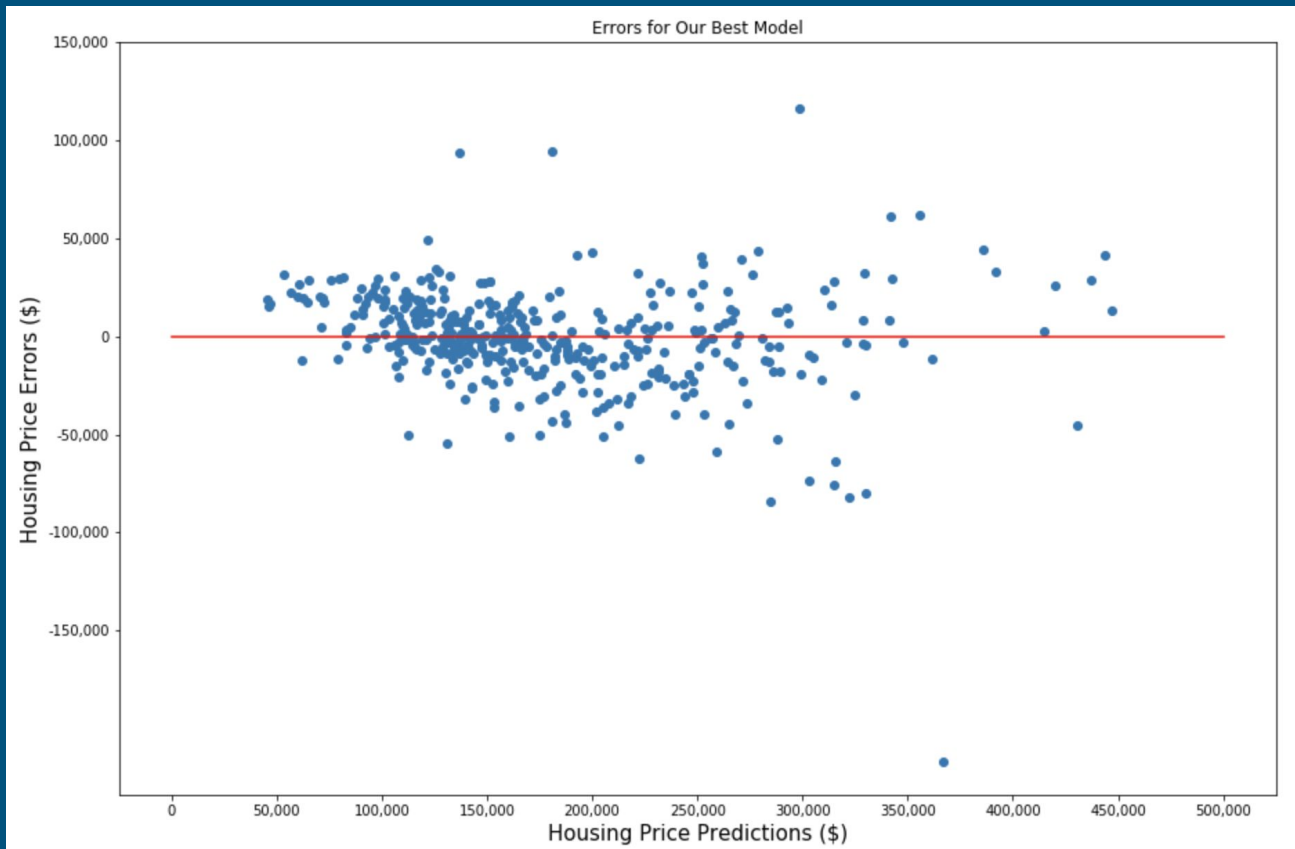
Goals

- To produce a model that could accurately predict a house's selling price based on 78 different features of the house
- To provide insights about how the features of a house affect the price, and about what we can control as realtors

How We Compared Models

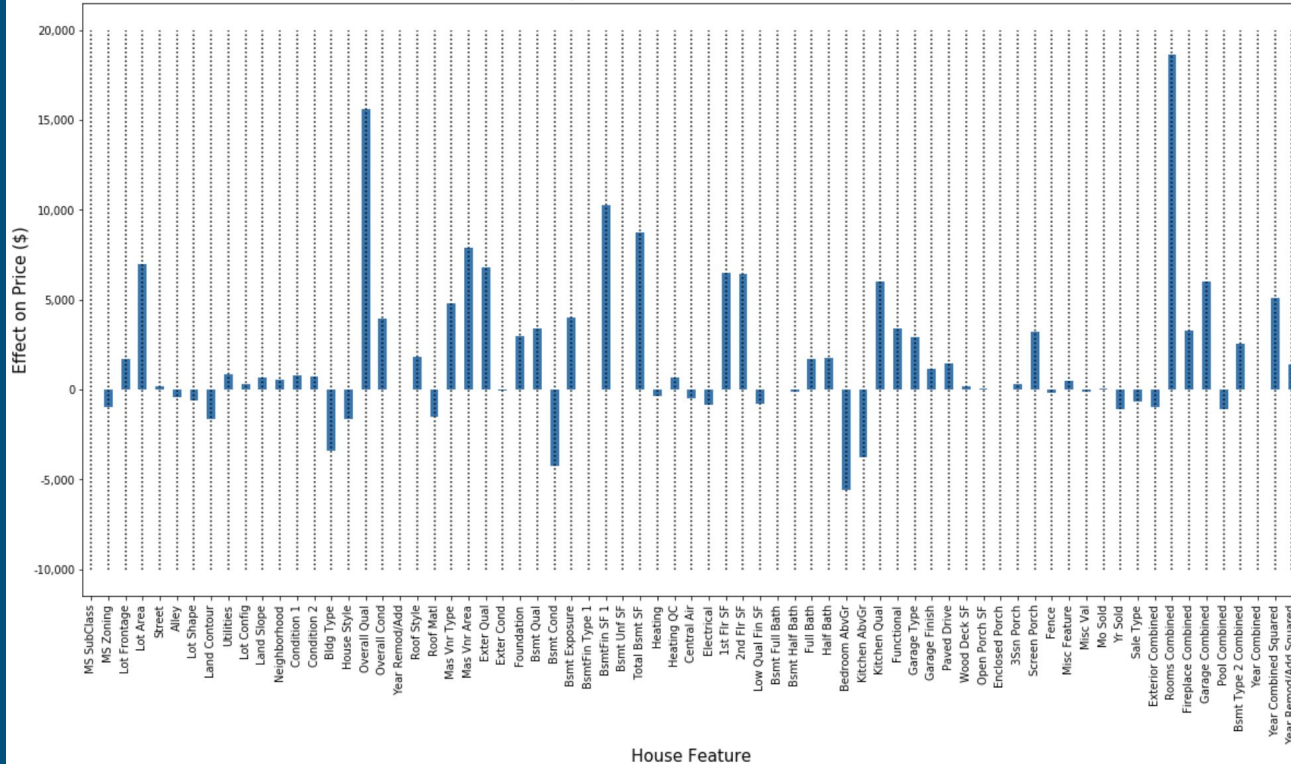
- We compared our models using their **scores**
 - **Scores close to 100%:** perfect predictions
 - **Scores close to 0%:** no better than assuming average prices
- Features of a house were compared based on how significantly far from average they were

Our Model's Accuracy: Score = 88.3%



Factors Influencing House Price

Effect on Price Based on How Significantly Far the Feature Is from Average



Positive Features for House Price

- Top 5 features:
 - Above ground living area combined with rooms above ground
 - Overall quality of the home
 - Square footage of the main finished area of the basement
 - Total square footage of basement
 - Area of masonry veneer on home

Features Unrelated to House Price

- Neutral features:
 - Primary basement area finish
 - Number of bathrooms in the basement
 - Porch area
 - Unfinished basement area size
 - Classification of the style of house

Negative Features for House Price

- Bottom 5 features:
 - Building type: 2-family conversion originally built as one-family
 - Land contour: flat
 - House style: 1.5-story with the 2nd level unfinished
 - Roof material: composite shingles
 - Zoning: agricultural

What to Change About a House

- Top 5 changes to make:
 - Increase the overall quality
 - Finish the basement
 - Add masonry veneer
 - Increase exterior quality
 - Increase garage quality

Additional Data to Generalize Our Findings

- Longer time period of data to show multiple economic swings
- Other cities, to compare the priorities for the homebuyers in those cities to Ames, IA

Questions?



Source: <https://www.pinterest.ca/pin/486107353505388808/>