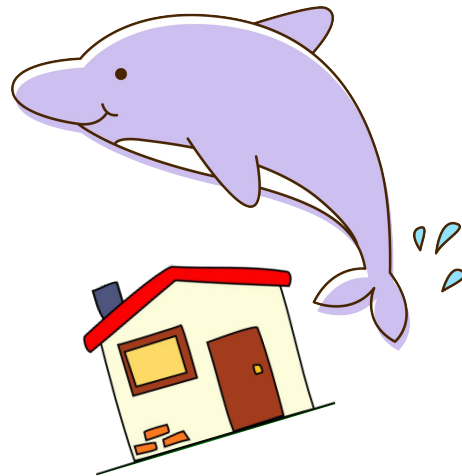


House Flippers International



Does location help us predict the price of our flipped homes?

an exploration
By Molly Baird

Overview

- **Ames, Iowa** housing data
 - I work for House Flippers International
 - Interested in expanding, looking for properties to buy and flip
 - They want to **predict sale price of prospective property**
-
- **What should they focus on to estimate sale price?**
 - **Should they focus on location?**

Guiding question

**Is location the best
predictor of sale price?**

Baseline model

- **Average sale price** of a home was **\$181,470** between 2006 and 2010
- Root Mean Squared Error (RSME): 83,944
 - on average, our predictions are **wrong by 46% of the average house price**

Location alone

Predicting Price Based on Location

- We don't have longitude and latitude data
- Neighborhood?
- Close to a railroad?

Location alone

Predicting Price Based on what the Buyer Can't Change:

- Zone (rural to metropolitan)
- Neighborhood
- Proximity to alleys and railroads
- Lot frontage, area, shape, and configuration
- Land contour and slope
- Access to utilities

Location alone

Performance:

- RMSE: 56,105
- On average, our predictions are **wrong by 31% of the average house price**
- Largely influenced by zone and proximity to railroads



Everything but location

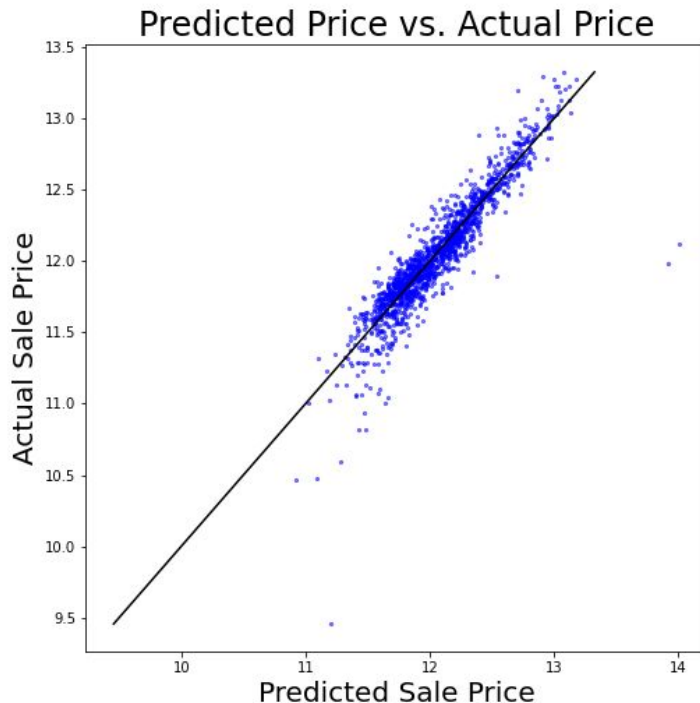
Predicting Price Based on what the Buyer Can Change:

- Exterior quality
- Garage quality
- Kitchen
- Heating/AC
- Square footage
- Roof style
- Number of bathrooms
- Basement quality

Everything but location

Performance:

- RMSE: 32,651
- On average, our predictions are **wrong by 18% of the average house price**
- Largely influenced by central air and exterior of the house



Everything together

Model Based on what the Buyer Can and Can't Change:

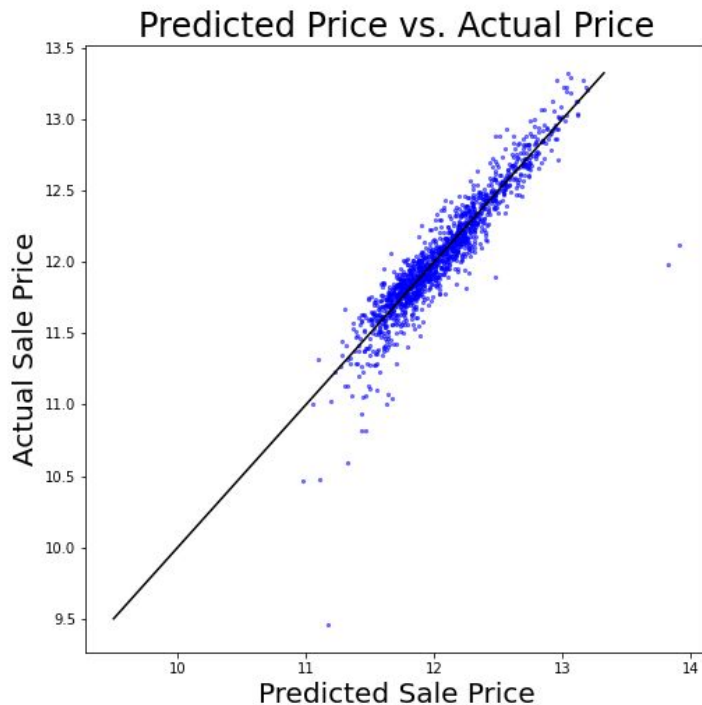
Combined all features from the previous two models

- Zone (rural to metropolitan)
- Neighborhood
- Proximity to alleys and railroads
- Lot frontage, area, shape, and configuration
- Land contour and slope
- Access to utilities
- Exterior quality
- Garage quality
- Kitchen
- Heating/AC
- Square footage
- Roof style
- Number of bathrooms
- Basement quality

Everything together

Performance:

- RMSE: 31,616
- On average, our predictions are **wrong by 17% of the average house price**
- Largely influenced by central air and exterior of the house



Conclusion

- Location, location, location....but also the quality of the existing structure
- Changeable features makes a difference
- **Good** news for house flippers!

Thank You!

