Flipping Homes in Ames, Iowa

Analyzing housing features to determine housing prices

By Jack Roach

Problem Statement

Determine which features on a piece of property contribute most to its sale price

Use these features to increase the sale price

How do we do this?

We build a model to predict the sale prices of homes in Ames, Iowa

Use this model to determine which features affect price the most

Our Data

Over 2,000 data entries on properties sold in Ames, Iowa from 2007 to 2010

Data from the Ames, Iowa Assessor's Office

Some of our Features:
- Property Size (SqFt)
- Overall Condition
- Living Space (SqFt)
- Car Space in Garage
- Kitchen Quality

Average Sale Price in our Dataset:

$181,469

Distribution of Sale Price ($1000)

Analyzing our Data

Looking for obvious trends between variables and house price

Both Quality Score and Living Space are correlated positively with the sale price

Quality Score = 0.8

General Living Area = 0.72

Figure 1

Sale Price by Quality Score

Figure 2

Sale Price by Living Space

Our Model   88% Accurate

Model Type: Linear Regression

Categorical Variables: 11

Numerical Variables: 17

The Model accounts for 88% of the
variance in the Ames, Iowa housing
sale price data.

Actual vs Predicted Sale Price

Significant Features

Overall Material Quality Score: $9,040 increase per score point (1-10)

Sale Type: House Sales using contracts with 15% down payments and normal interest rates will sell for $63,241 more than court officer deeds. New Houses sell for $27,800 more.

Neighborhood: Avg. value increase of house in Green Hills is $128k compared to a house in Bloomington Heights

Recommendations for House Flipping

- ❖ Build Houses in the Green Hills or Stone Brook neighborhoods
- ❖ Build a new house rather than renovating one
- ❖ Build the foundation out of slab instead of brick
- ❖ Replace brick masonry veneer walls with stone ones

- ❖ Renovate the Kitchen and Fireplace(s)
- ❖ Build houses near parks/nature
- ❖ Use High quality house materials