

Blueprint to Home Buying

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Image credit: creativemanitoba.ca

The Problem

- Uncertainty in first-time home buying
 - ◆ Either know your budget or your dream house
 - ◆ Getting one from another at this stage is time-intensive and ambiguous
- Goal: bring clarity and accessibility to home buying process
 - ◆ Specifically: budget setting and home feature expectations

The Product: BluPrint

- Making planning for home buying accessible
 - ◆ Adapting to fit the modern culture
 - ◆ On user's own time, own terms
 - ◆ Allows user some agency
- Gives company's market another dimension
 - ◆ Allow direct, tailored listings
 - ◆ Appeals to another demographic

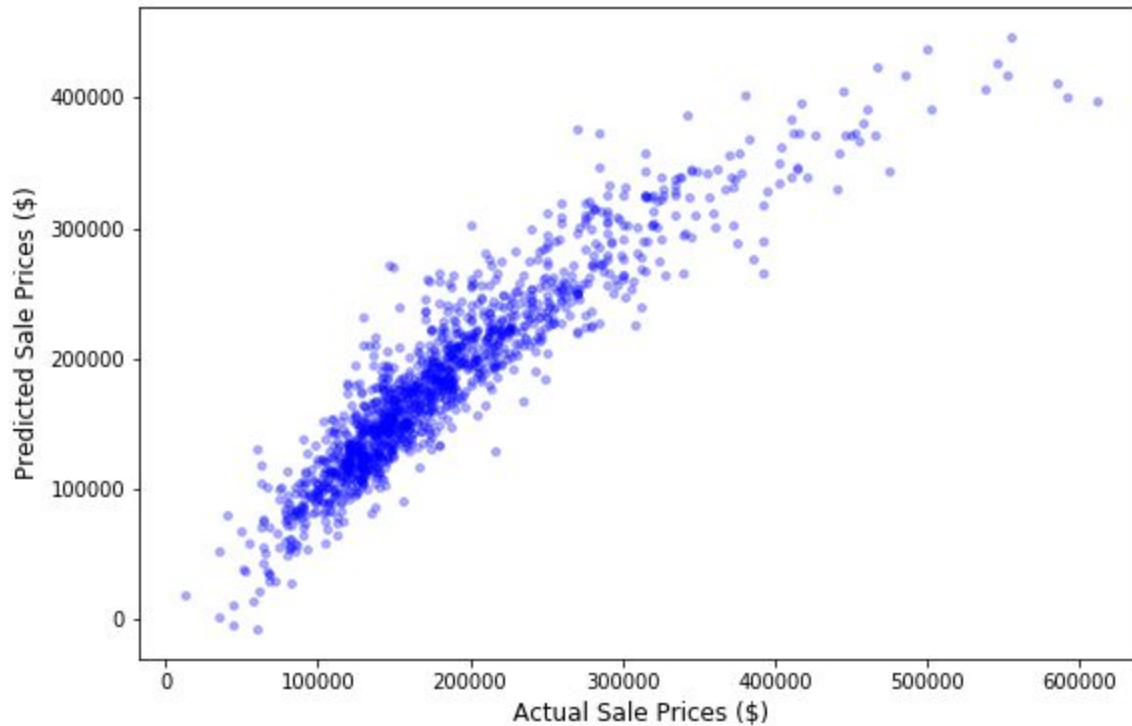
The Question

- Home features
 - ◆ Usable for an app
 - ◆ In human understandable terms
 - ◆ General, not overly specific
 - ◆ Meaningful to ultimate sale price
- What relationship do these traits share with final sale price?

The Model

- LASSO Regression
 - ◆ Type of Linear Regression
- Built off the Ames Housing Dataset
 - ◆ Dataset tracking home and lot properties and sale prices
 - 2006 - 2010
 - Ames, Iowa
- Predicts sale price based on parameters

True Sale Prices and Model-Predicted Sale Prices



The Parameters

- Final parameters included in the model:
 - ◆ Neighborhood, House Style, Number of Rooms, Total Square Footage, Overall Condition/Quality, Kitchen Quality, Basement Condition, Garage Type, Pool Quality, Age at Sale, Remodel Age at Sale
- Variation in these traits explain 84% of the variation in sale price

The Action Plan

- Implement in local trial
- Based on interest/activity, expand to specific cities
 - ◆ Expansion would involve rebuilding model with new data from target city
 - Barring this: remove neighborhood feature from model
 - ◆ Trends and impact of features vary per city/region