



King County Real Estate

Predicting Prices and Assisting Sellers

Outline

Business Problem

Data

Model

Results

Recommendations

Business Problem

Real estate agencies in King County, WA want to be able to

1. Recommend whether sellers should make upgrades to their house before selling
2. Provide accurate estimates for price



King County



Data

King County makes data available to the public

Contains 30,154 house sales

Data includes:

Price

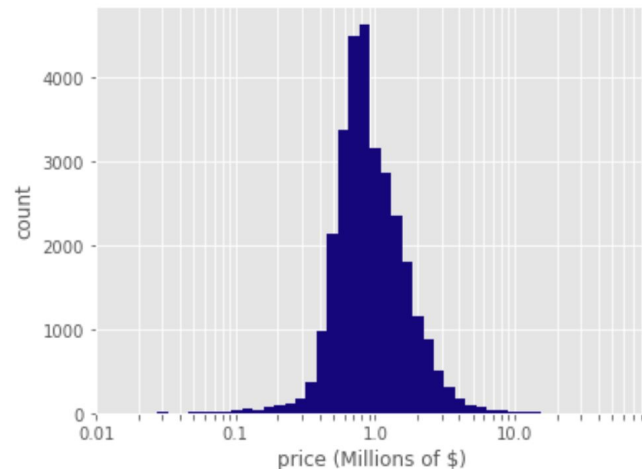
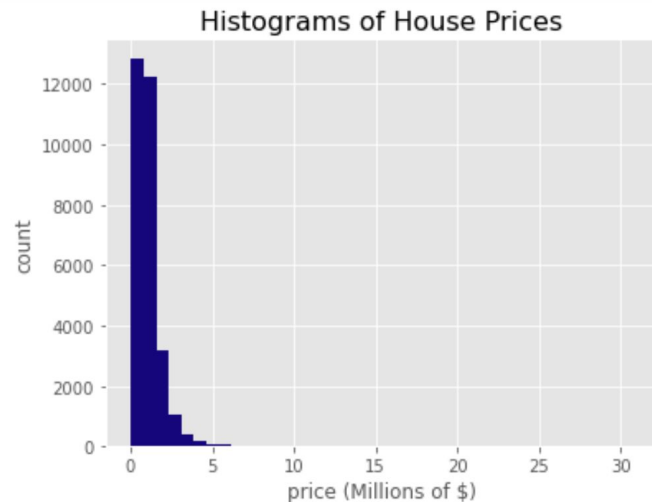
Location

Square footage

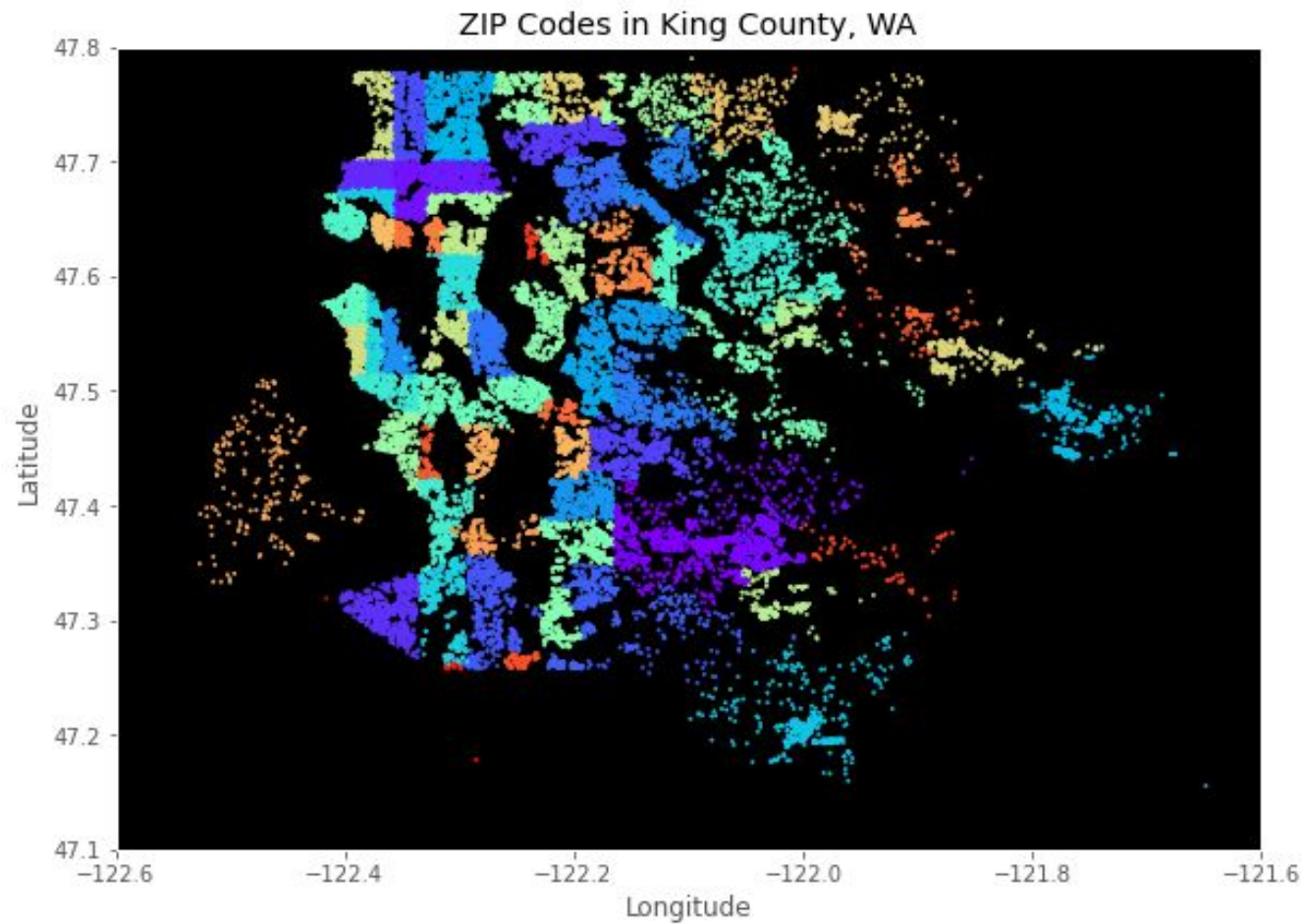
Quality of house

Environment around house

Whether house was renovated



ZIP Codes



Model: Linear Regression

| Model Predicts Price Based On: | Baseline Model Assumes: |
|----------------------------------|-------------------------|
| Square feet of living space | 1920 square feet |
| ZIP code | 98042 (has most data) |
| Grade | 8 |
| Condition | Average |
| Whether a renovation was done | No renovation |
| Whether house is on a waterfront | Not on a waterfront |

Model starts with baseline price of \$636,057.

Changing any feature multiplies the price by some factor

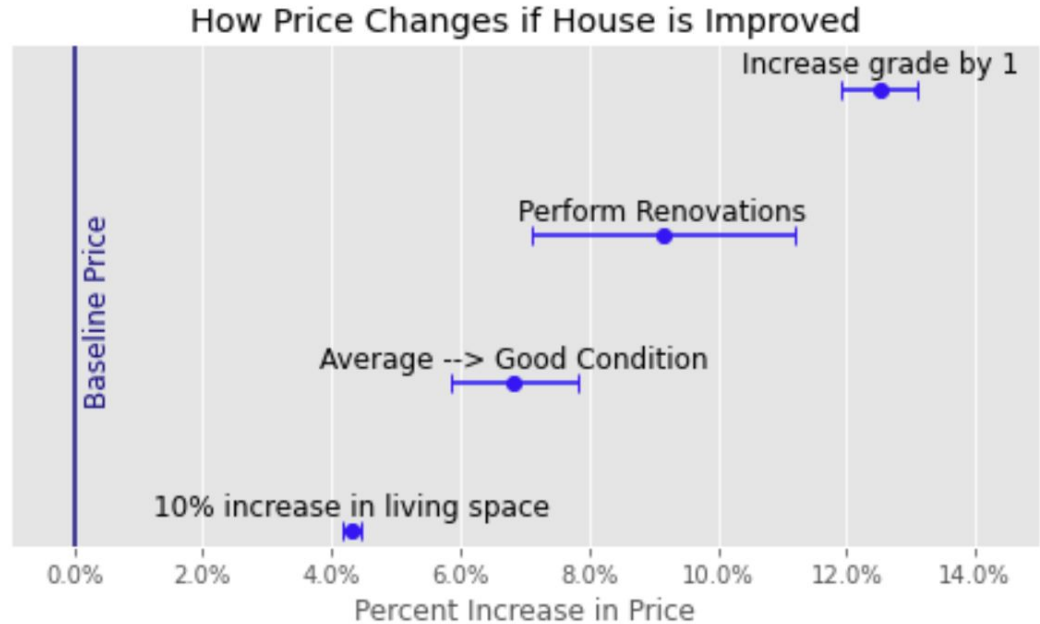
Factors determined by fitting real data

Results

Increasing grade makes the biggest improvement.

Renovations and improving condition also make a significant difference.

Price increases more for more expensive homes according to this model



How Good is the Model?

Used 90% of the data to make model,
predict prices for the remaining 10%.

75% of the predictions are with 25% of
the actual price.



Example

Seller has house valued at \$750,000.

Performing renovations is predicted to increase the price to \$818,632.

As long as the renovations cost **less than \$68,632**, the seller would benefit from doing the renovations.

If the renovations would increase the grade, condition, or square footage, it could potentially raise the price even more.

Thank You

Any Questions?

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GitHub For This Project: <https://github.com/daviderics/KC-House-Sales-Phase-2-Project>

LinkedIn: <https://www.linkedin.com/in/david-schenck-57183b264/>