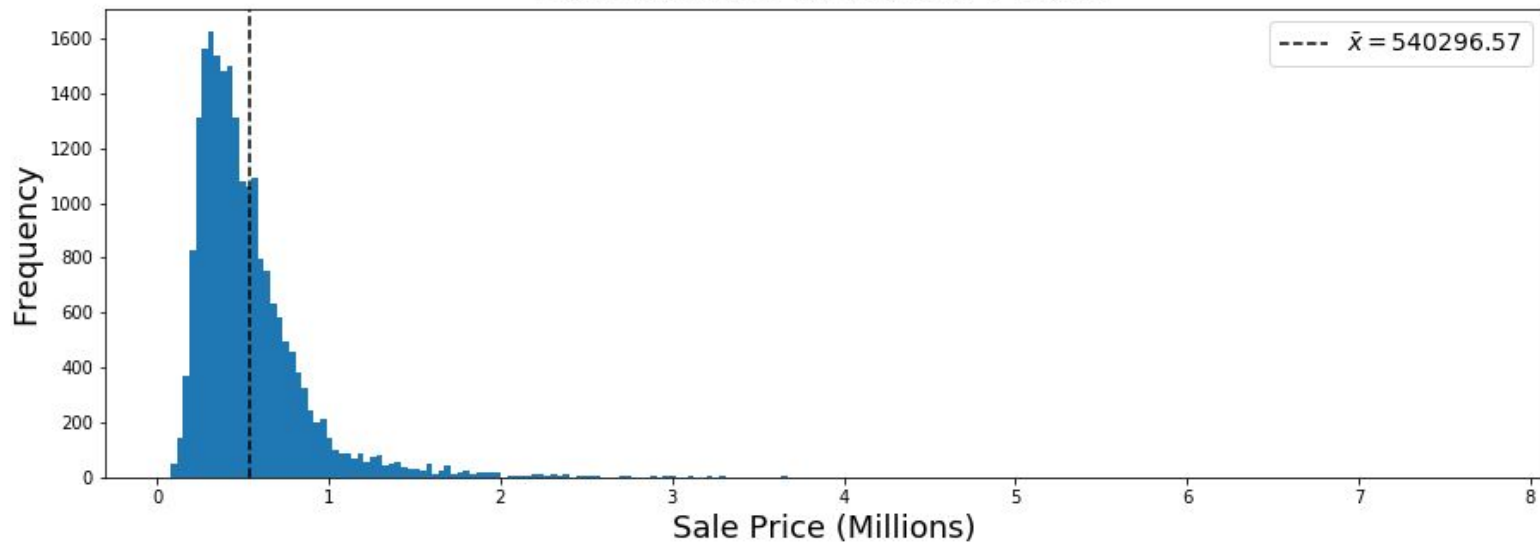


Predicting Housing Prices

Sam and Dan

Distribution of House Prices

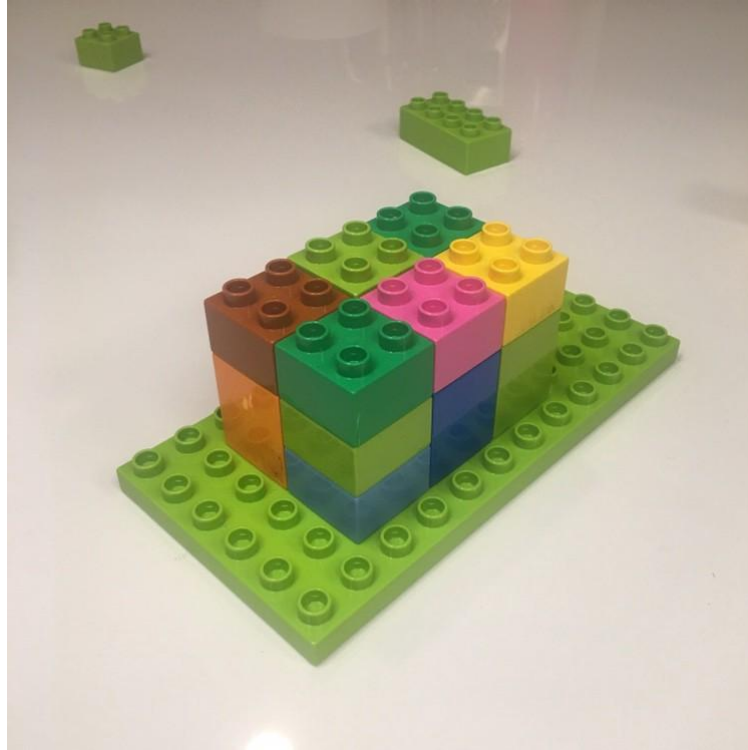


Goal

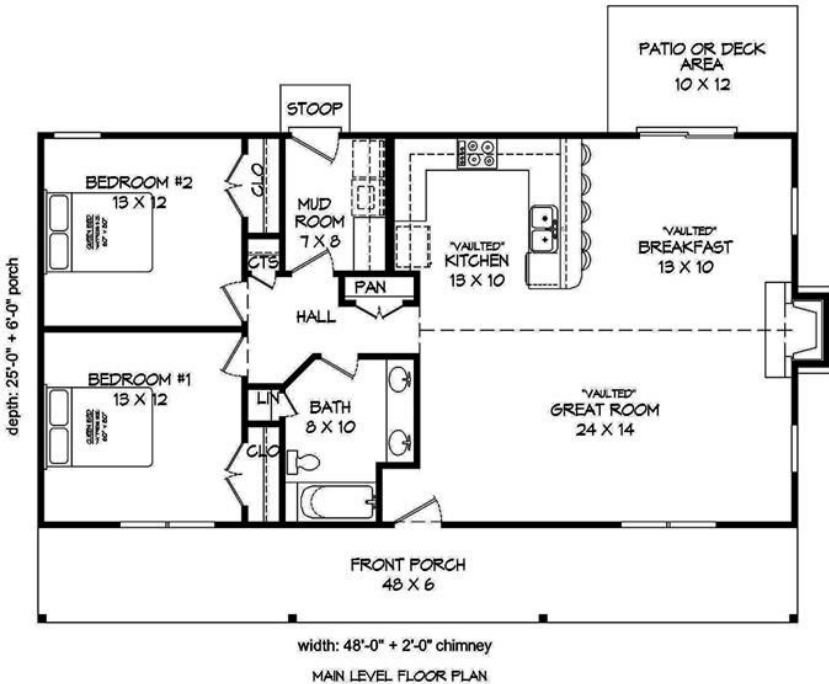
To create a model for predicting a 95% confidence interval for housing prices, including the following predictors:

- Sqft Living
- Floor Area Ratio
- If the house is on the water
- Bathrooms
- Bedrooms
- Floors
- Zipcode
- City
- Size of surrounding 15 lots, if available

Floor Area Ratio - Living Space / Lot Size



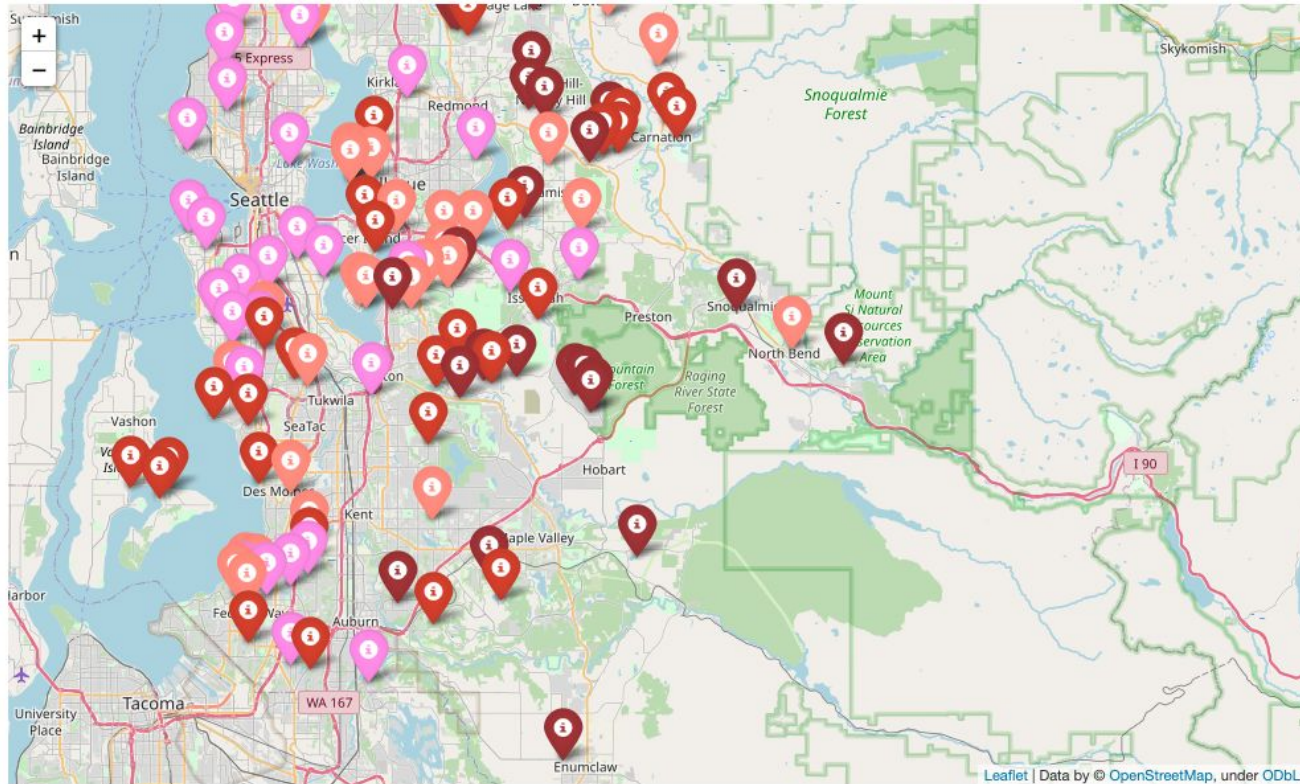
Bedrooms - Less is More



<https://www.theplancollection.com/house-plans/home-plan-29622>

<https://www.theplancollection.com/house-plans/home-plan-22589>

Square feet of 15 surrounding lots:



Example Prediction

- Actual Price = \$560,280
- Predicted Price = \$445,938 (\$182.76 per sqft)
- 95% CI = \$296,196 - \$671,380



Example Prediction

- Actual Price = \$333,960
- Predicted Price = \$240,505 (\$172.53 per sqft)
- 95% CI = \$158,949 - \$360,849



Example Prediction

- Actual Price = \$3,335,000
- Predicted Price = \$1,641,468 (\$403.31 per sqft)
- 95% CI = \$1,088,686 - \$2,474,927



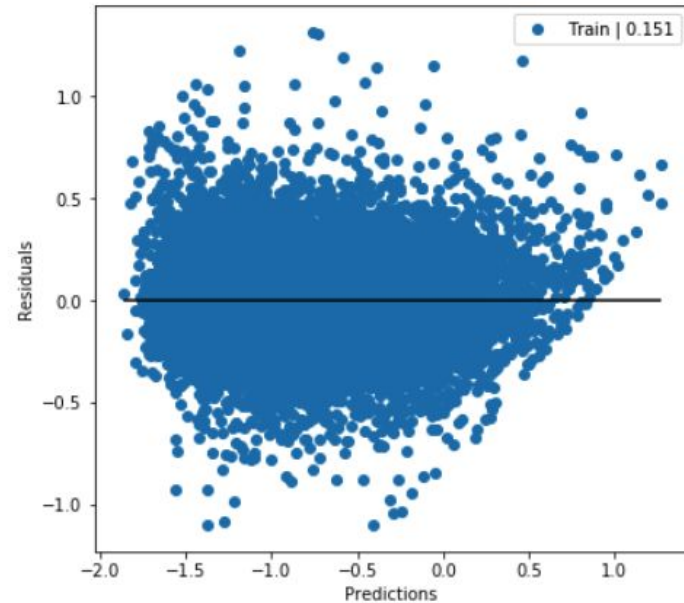
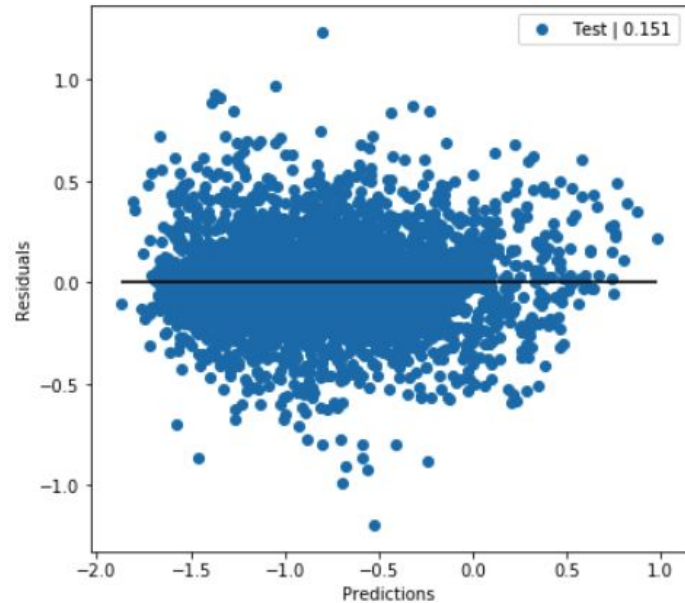
Example Prediction

- Actual Price = \$1,541,000
- Predicted Price = \$962,136 (\$232.12 per sqft)
- 95% CI = \$637,629 - \$1,451,795



Model Performance

- R-squared = .842



Key Takeaway

Increase Price	Decrease Price
<ul style="list-style-type: none">- Square feet of living space- Waterfront- Bathrooms- Floors- Area of surrounding 15 lots.	<ul style="list-style-type: none">- Bedrooms- Floor Area Ratio

Our model takes zip code and city into consideration, and these characteristics vary by location.