



Exploring Housing Sales



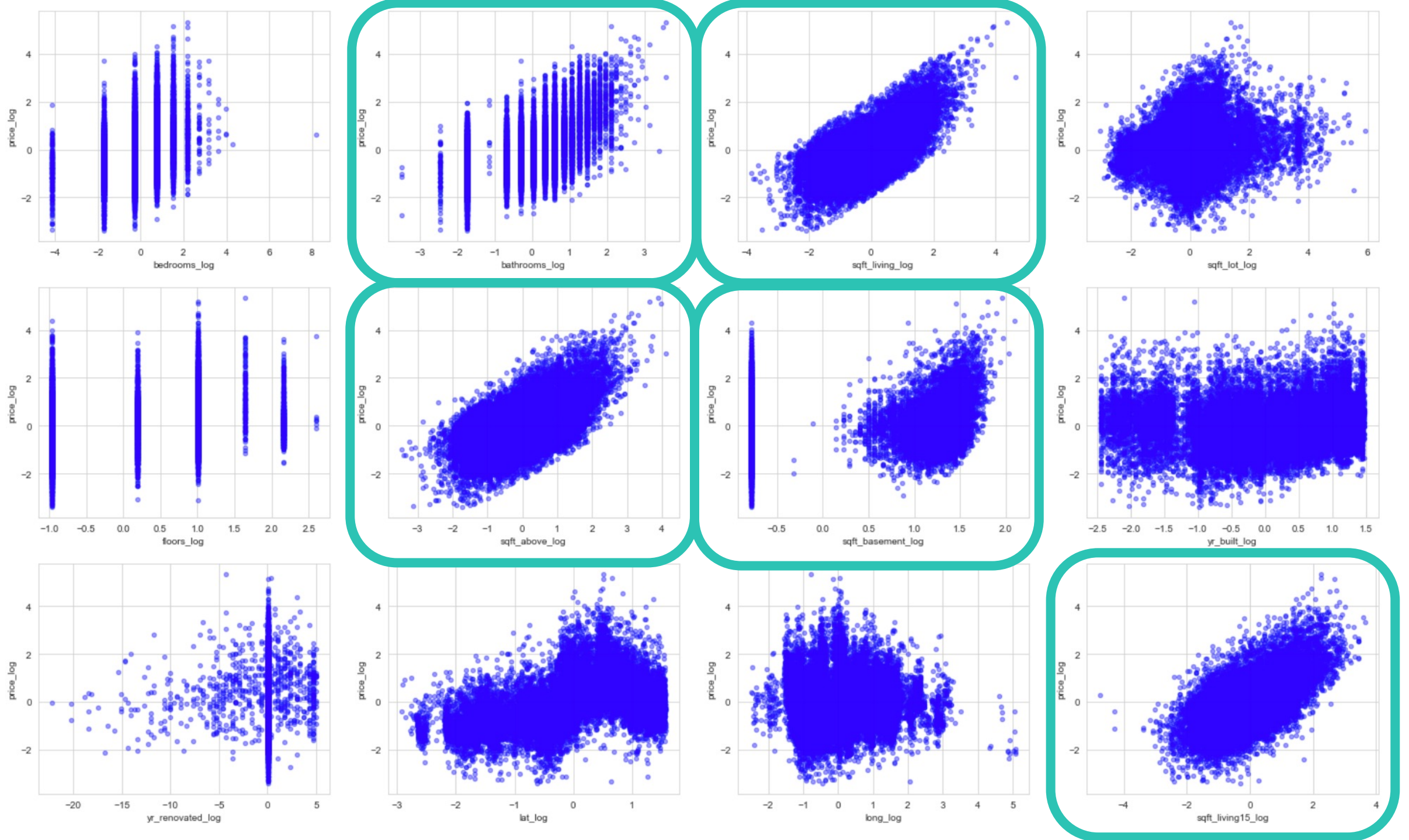
Caitlin Snyder
Flat Iron - Data Science
Module 2

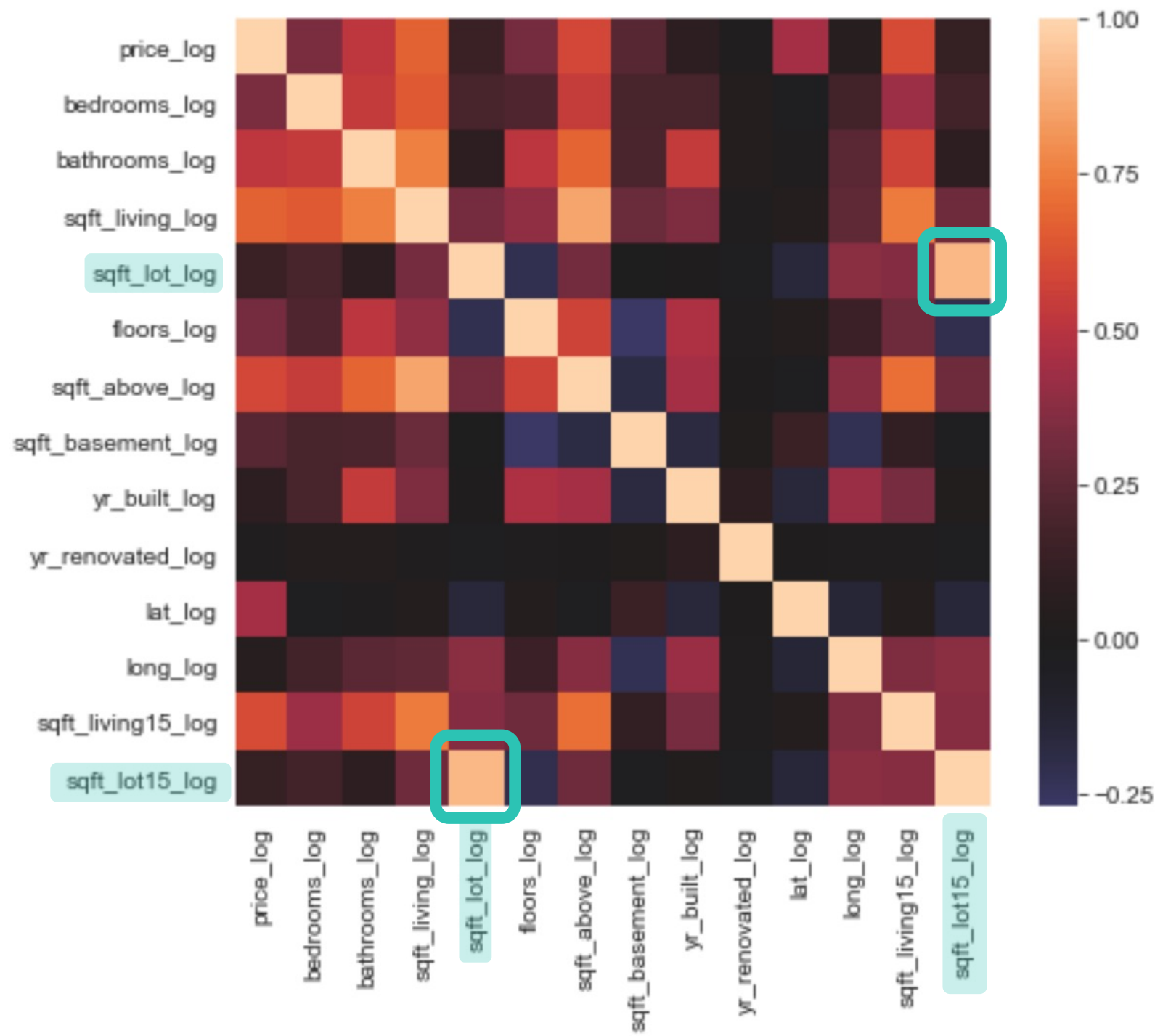


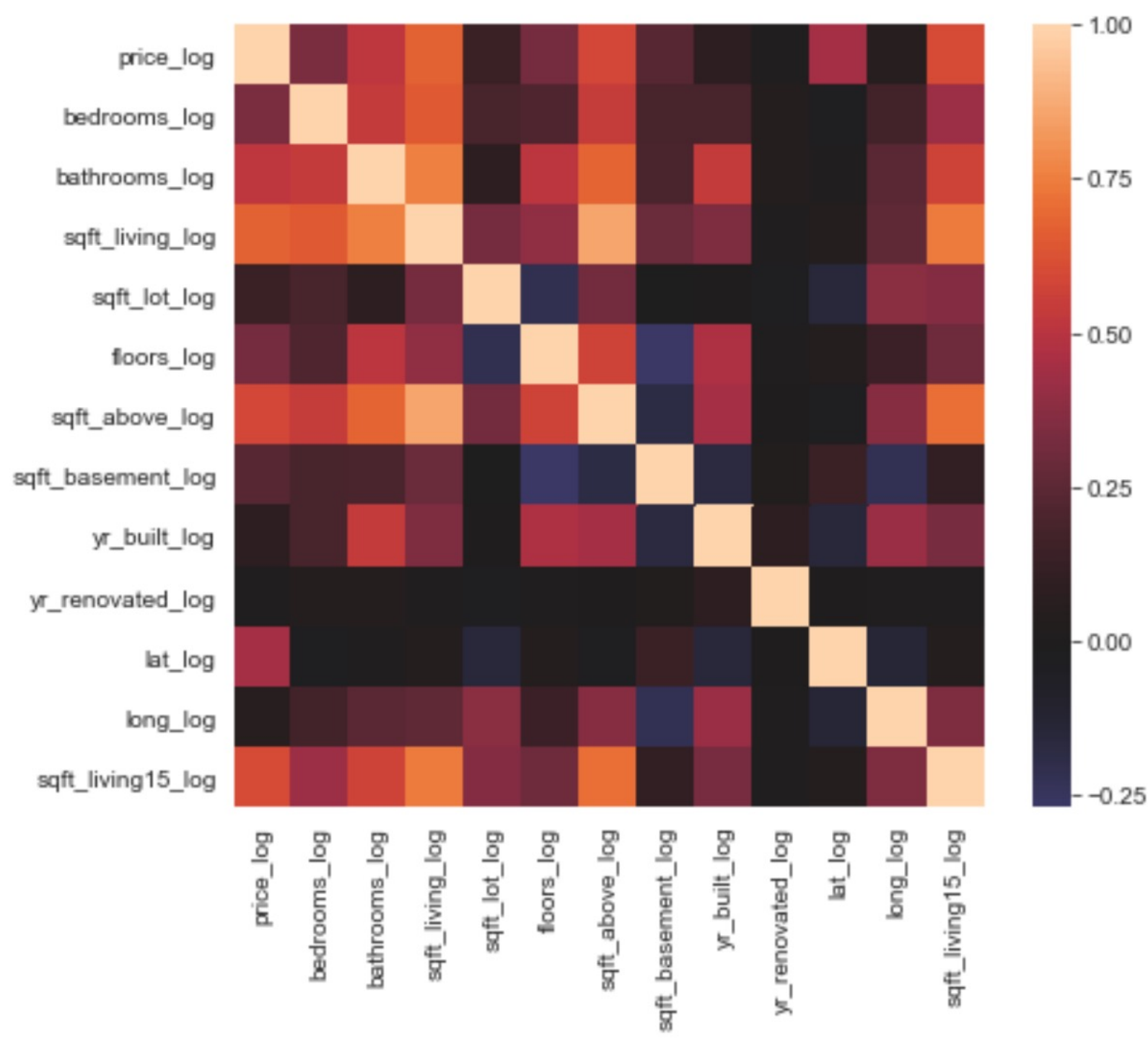
Questions

1. What is the effect on sale price of a low grade* classification?
2. What is the effect on sale price of a high condition* classification?
3. What is the effect on sale price of having a waterfront?

**as defined by the King County Assessor's Office*










Evaluating the model

Training r^2 : 0.887

Test r^2 : 0.881

Training MSE: 0.113

Test MSE: 0.118



Question 1:
What is the effect on
sale price of a low
grade classification?

0.7861

decrease in sale price units

Question 2:
What is the effect
on sale price of a
high condition
classification?

0.1305

increase in sale price units

Question 3: What is the effect on sale price of having a waterfront?


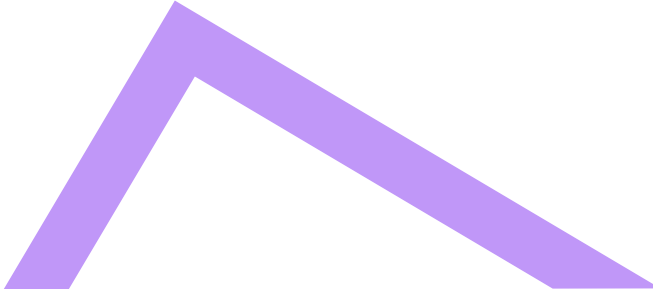
0.891

increase in sale price units





Take-aways

- Expect larger, higher quality structures with attractive surroundings to command higher sale prices.
 - Looking to increase your property's market value? Invest in the structural integrity and protect against property degradation over time.
- 
- 



Future avenues for exploration

- Does elevation have an interaction effect on the relationship between sale price and waterfront property?
- Is there a relationship between the inspector and the sale price, when controlling for other variables?

Sources

- Outliers: <https://towardsdatascience.com/ways-to-detect-and-remove-the-outliers-404d16608dba>, <https://stackoverflow.com/questions/23199796/detect-and-exclude-outliers-in-pandas-data-frame>
- Log transformations: <https://discuss.analyticsvidhya.com/t/methods-to-deal-with-zero-values-while-performing-log-transformation-of-variable/2431/2>
- OHE: <https://towardsdatascience.com/categorical-encoding-using-label-encoding-and-one-hot-encoder-911ef77fb5bd>
- Stepwise regression: <https://towardsdatascience.com/stepwise-regression-tutorial-in-python-ebf7c782c922>
- Interpreting coefficients: <https://statisticsbyjim.com/regression/interpreting-t-coefficients-p-values-regression/>



Thank you!