King’s County Housing Prices

A Supplemental Diligence Packet for Asset Valuation

Executive Summary & Recommendations

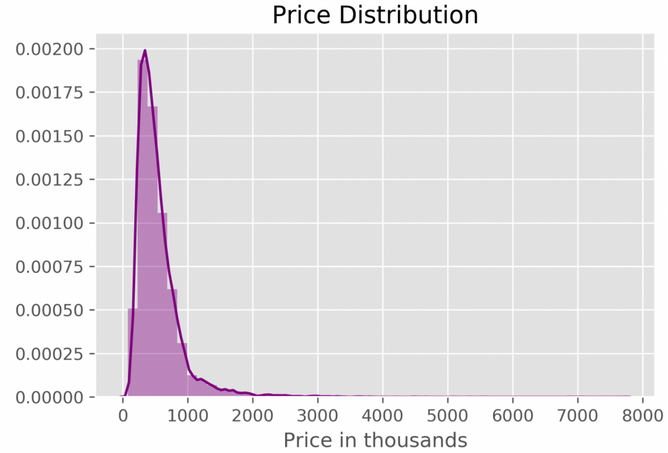
Guiding Questions	
1	What does the current KC housing market look like? What do the majority of houses have in common? What does the typical KC house look like?
2	Are there specific times of the year (days or months) that might be correlated with higher sales prices? This will help provide some information on when the best time to sell could be.
3	Are provided quality rankings (grade, condition, etc.) trustworthy / relevant to predicting sale price? Targeting a higher grade / condition via investment may be a viable way to grow sale price.

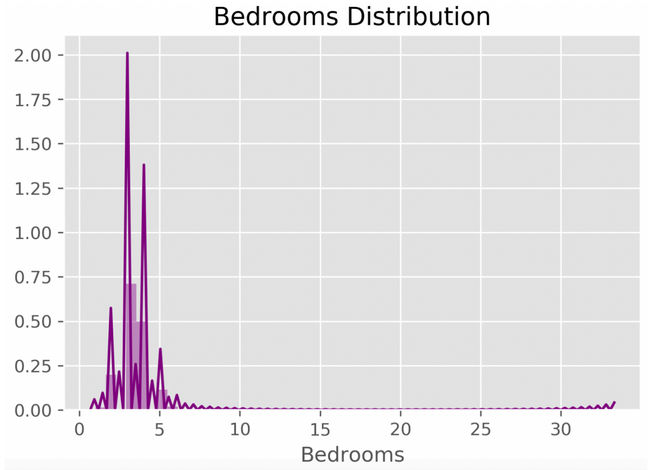
Recommendations	
1	When purchasing houses, **look for houses that have no history of renovation or a low KC grade** to maximize upside potential. Additionally, **if structure of building cannot change materially, purchase house with basement or 2 floors** as these will be hard to add later on (may result in higher purchase price upfront). **If data on house is not available, the size of neighboring living square footage as that is a very strong predictor as well**.
2	When selling assets, **target selling during the spring months**, as these months are correlated with higher sales prices.
3	Once an asset is owned, leverage model to drive investment. From our model, we can see **renovations and houses with high quality scores (high condition and high grade) are related to higher sales prices**. Driving upside improvement with Renos, improved quality scores can help improve sales price.

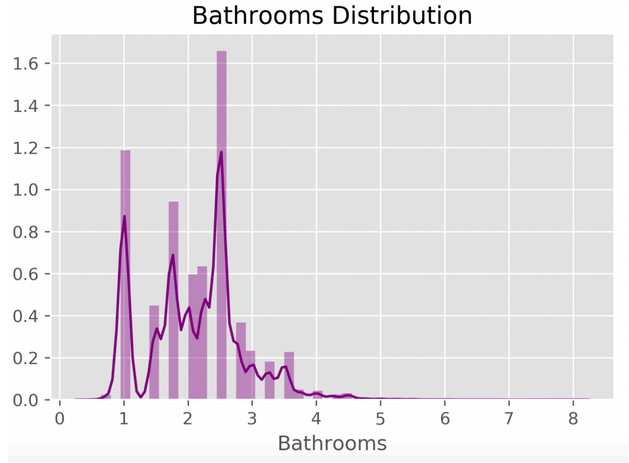
Initial Findings

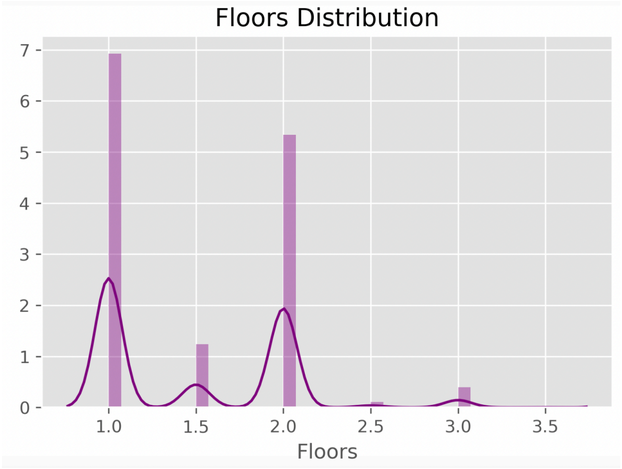
King's County Housing Market

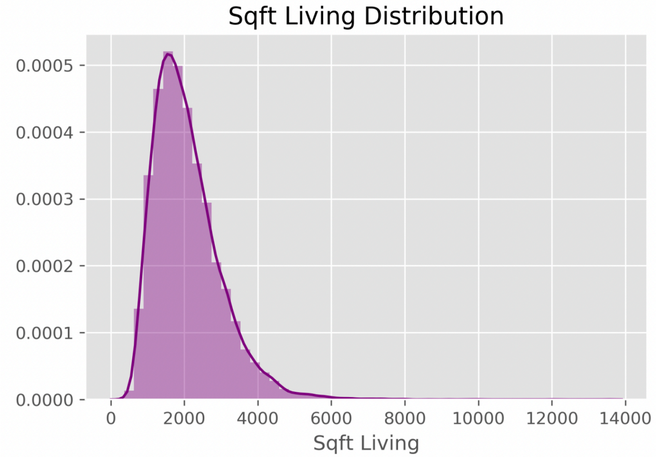
Distributions of Popular Variables

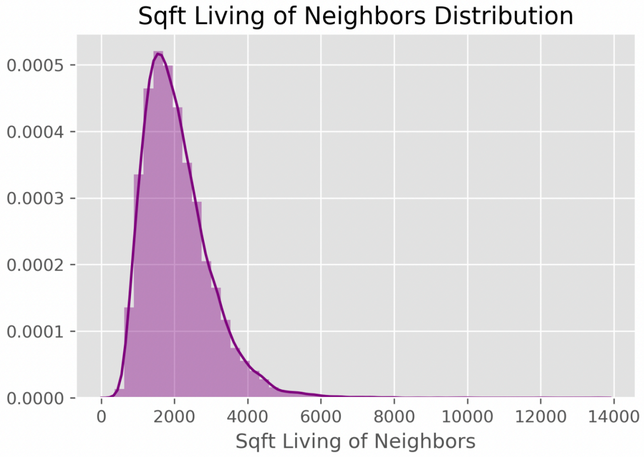








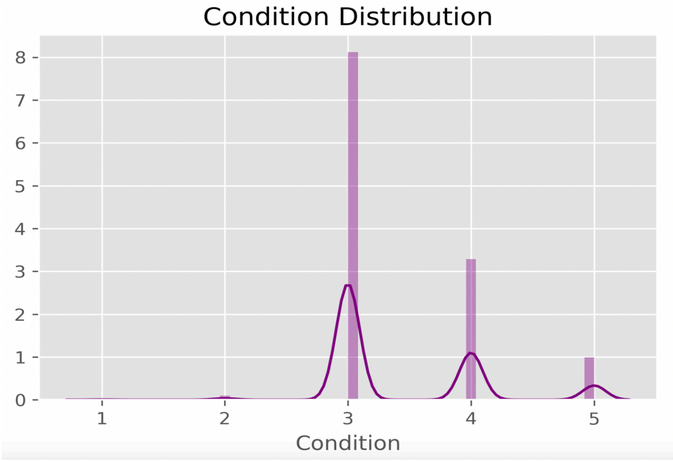


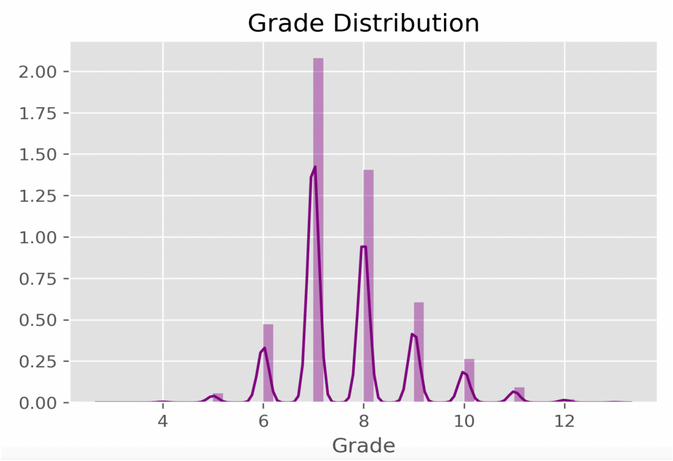


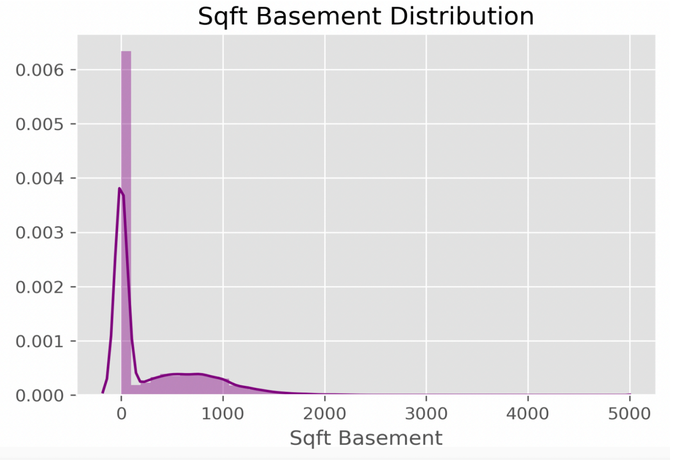
Initial Findings

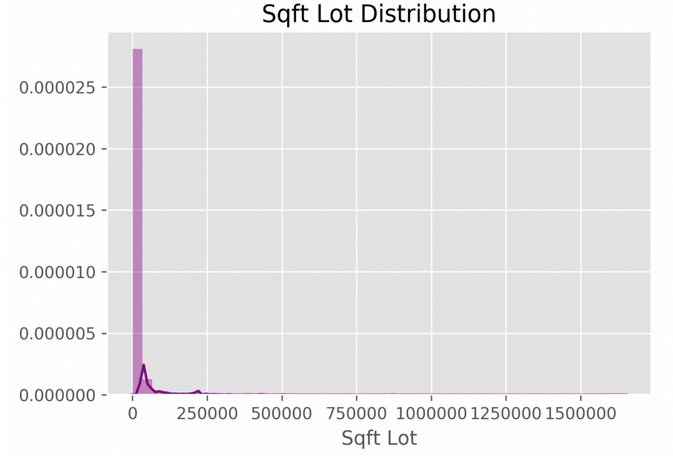
King's County Housing Market

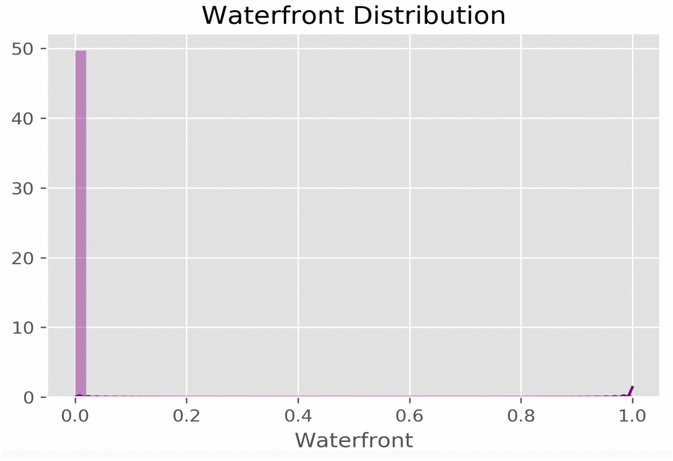
Distributions of Popular Variables

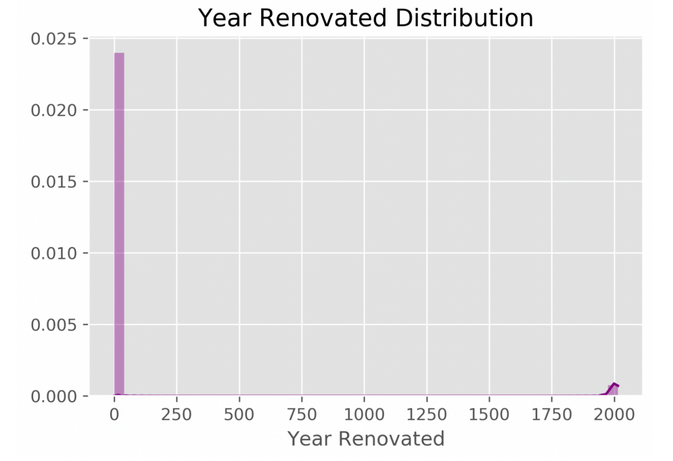








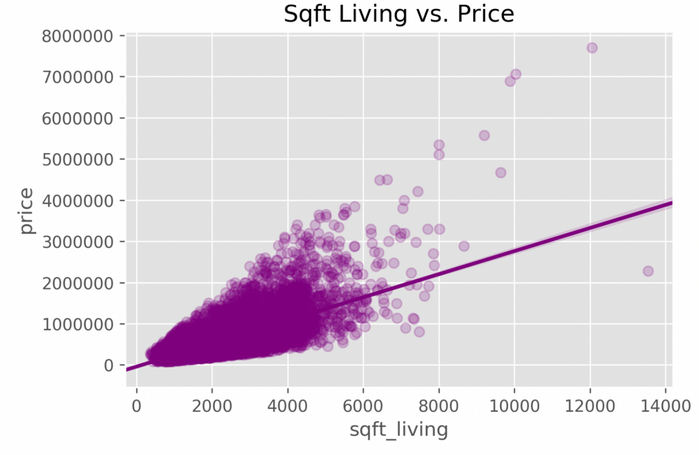


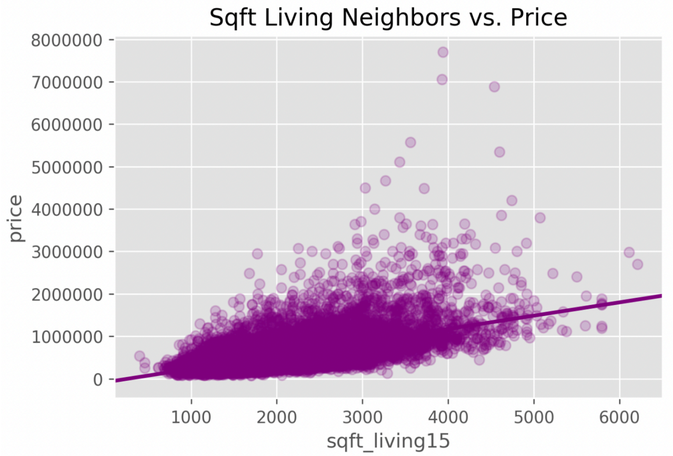


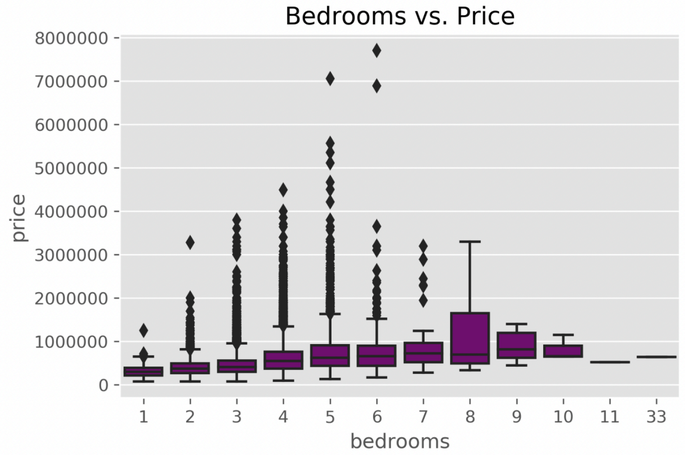
Initial Findings

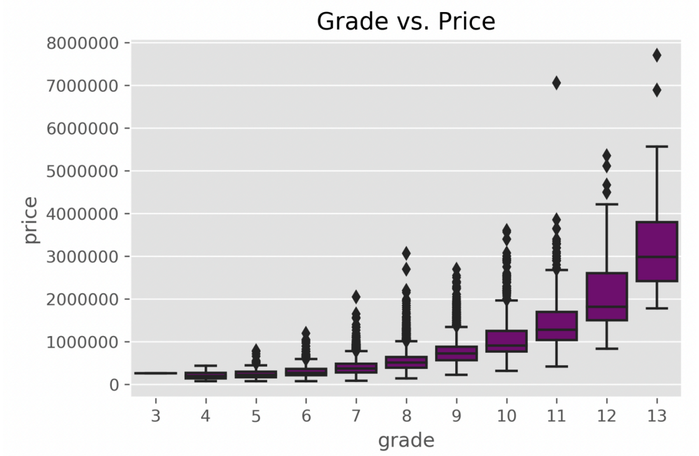
King's County Housing Market

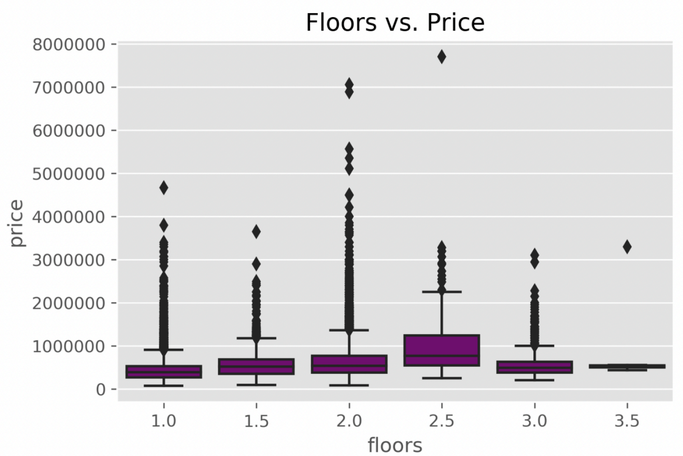
Select Variables vs. Price

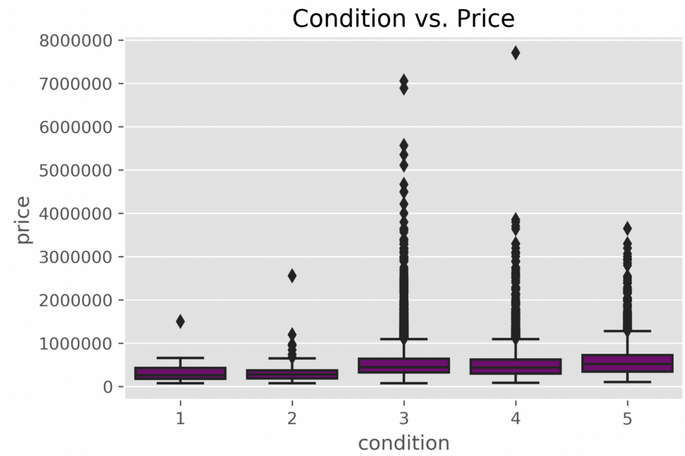








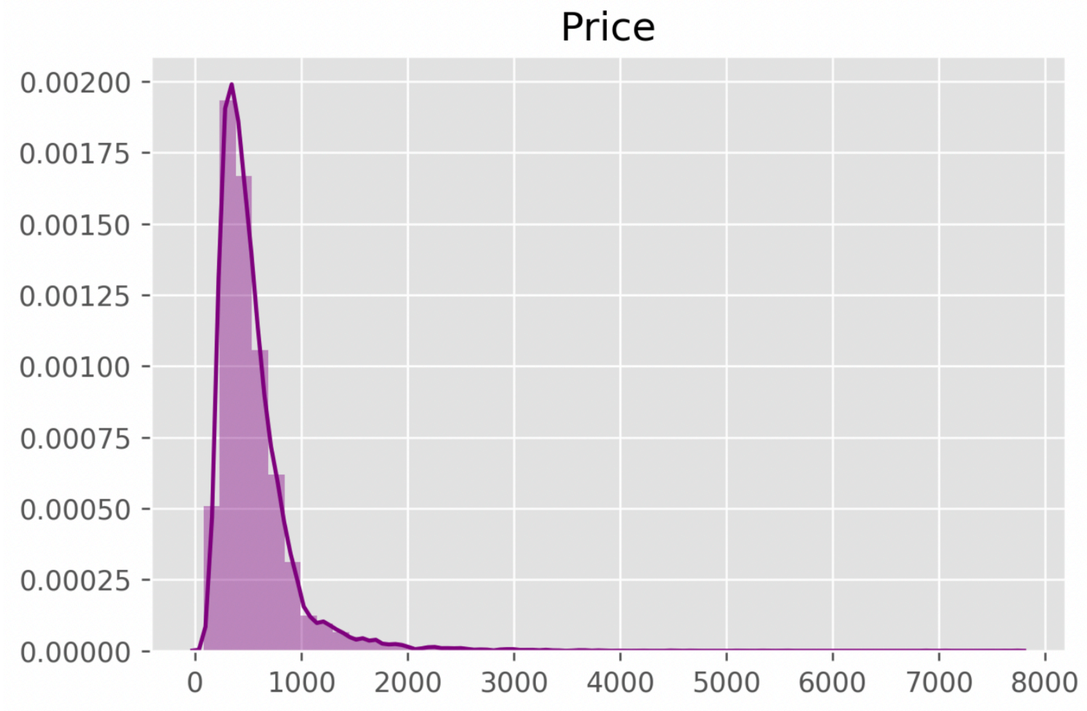


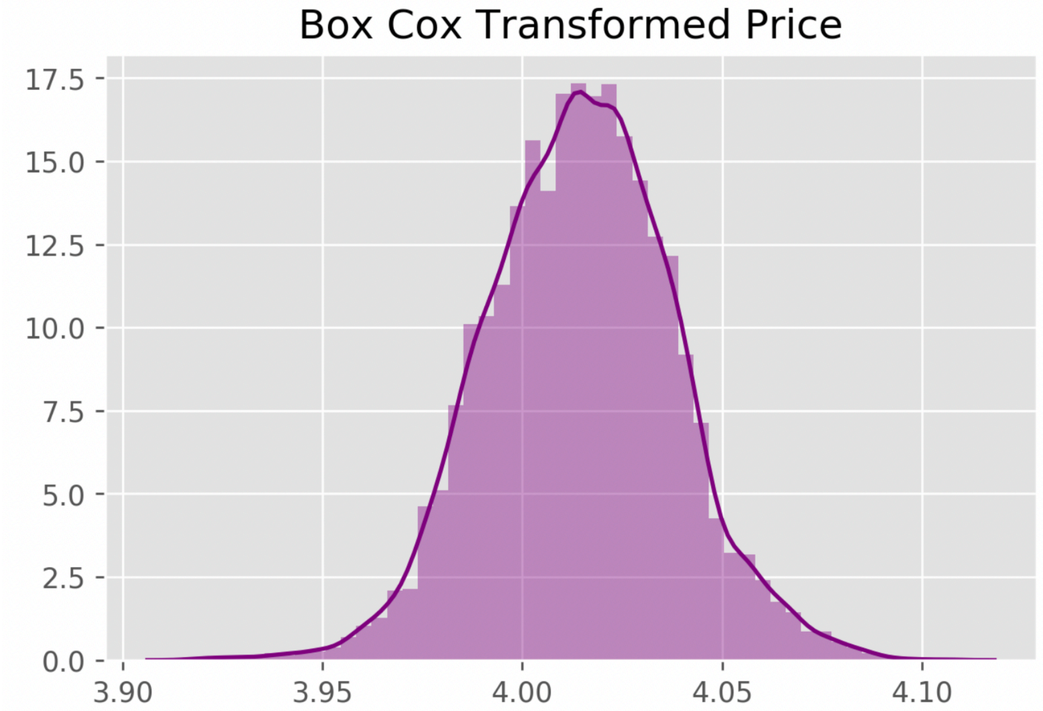


Methodology

Regression on BoxCox Transformed Price

Transforming Price

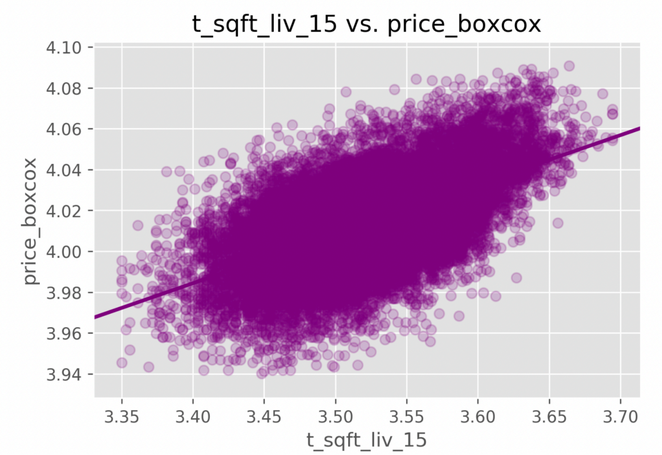


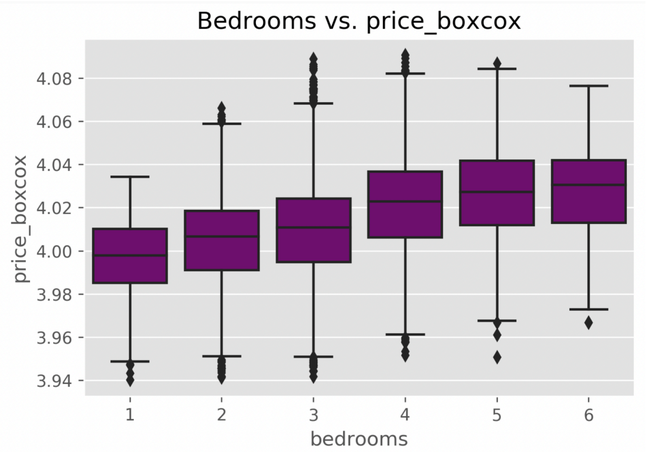


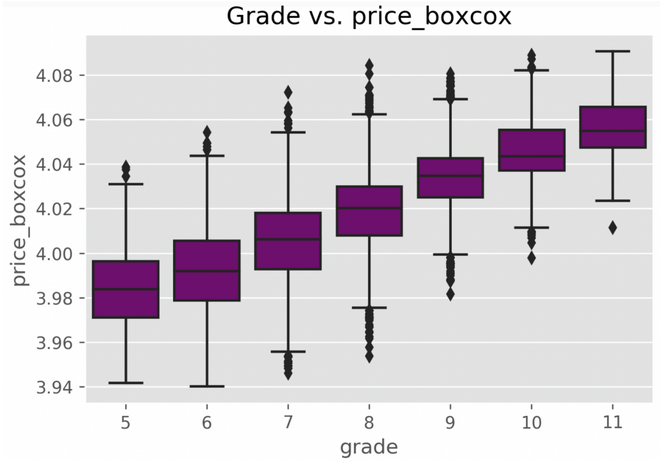
Methodology

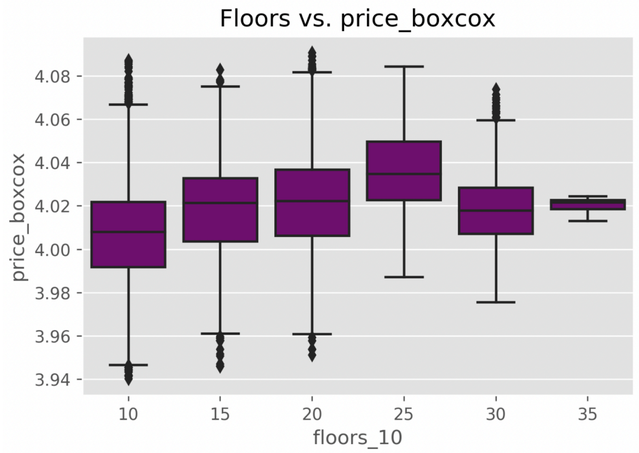
Preprocessing Improves Results

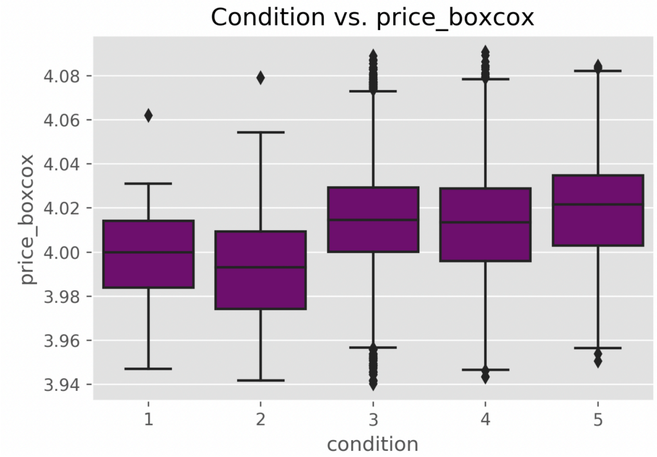
Transformed Variables vs. Transformed Price

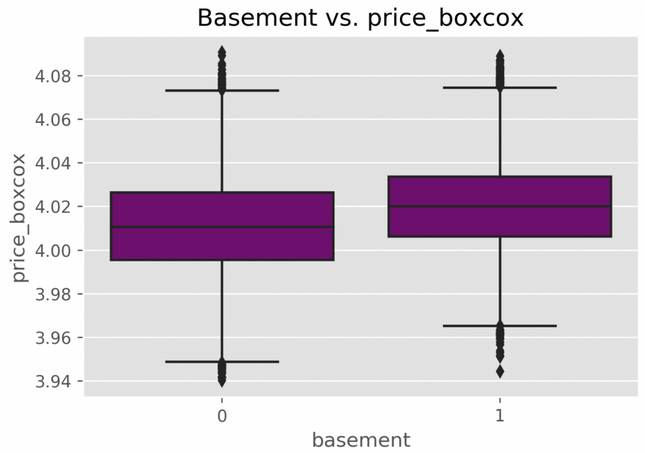








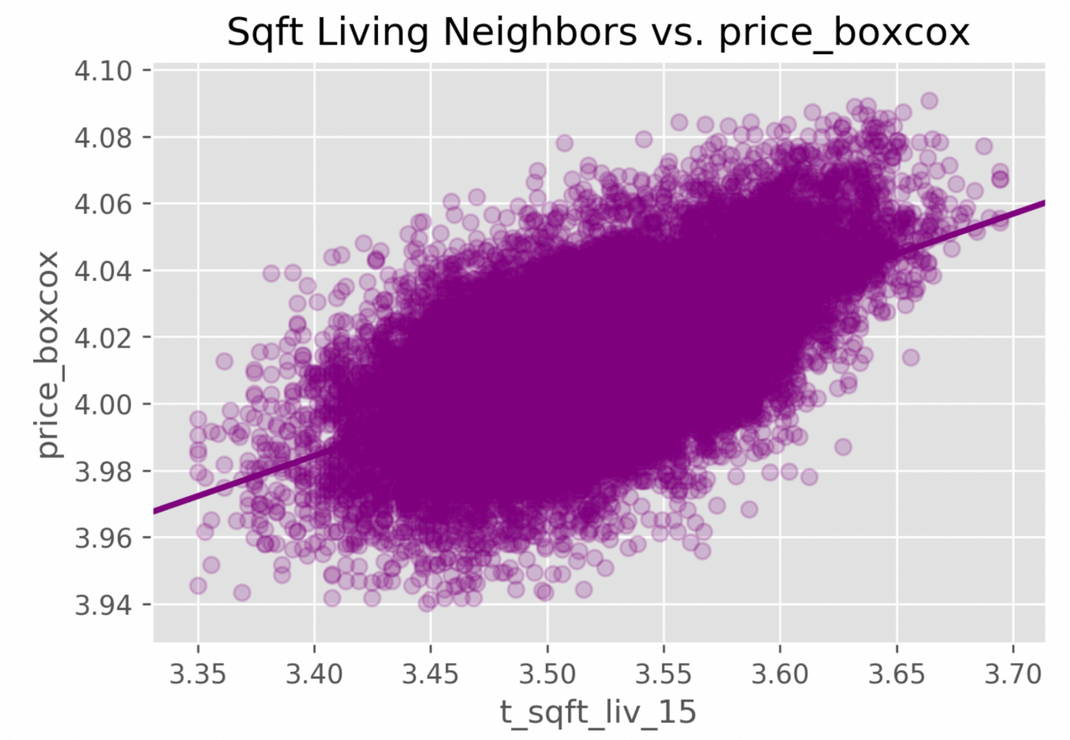




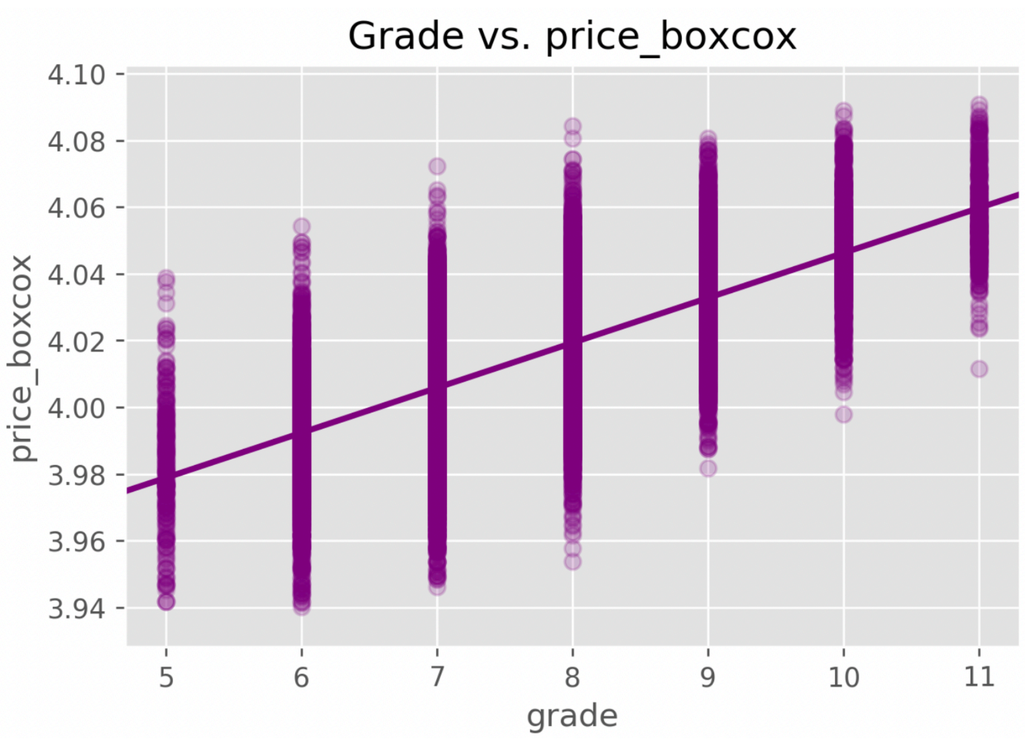
Final Model & Predictors

King’s County Housing Market

Numerical Deep Dive



Coefficient Confidence Interval: (0.093, 0.103)
Standalone R-squared value: 34%



Coefficient Confidence Interval: (0.010, 0.011)
Standalone R-squared value: 44%

Future Work

Additional Ideas for the Future

1	Roll model forward to pull off data from latest years - model in data was only from 2014 to 2015
2	Investigate how to end up with larger effect size / coefficients. While the coefficients we have are statistically significant, the coefficients are fairly small.
3	Improve model fit — today model only explains ~54% of the variance in transformed price. Room to expand and improve results. Look at including interaction terms and polynomials.

Thank you!