

King's County Housing Prices

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?
2	Are there specific times of the year (months) that might be correlated with higher sales prices? This will help provide guidance on best time of year to sell.
3	Are the provided quality rankings (grade, condition, etc.) trustworthy / relevant to predicting sale price? Improvements to raise a house's grade / condition can potentially drive sale price up.

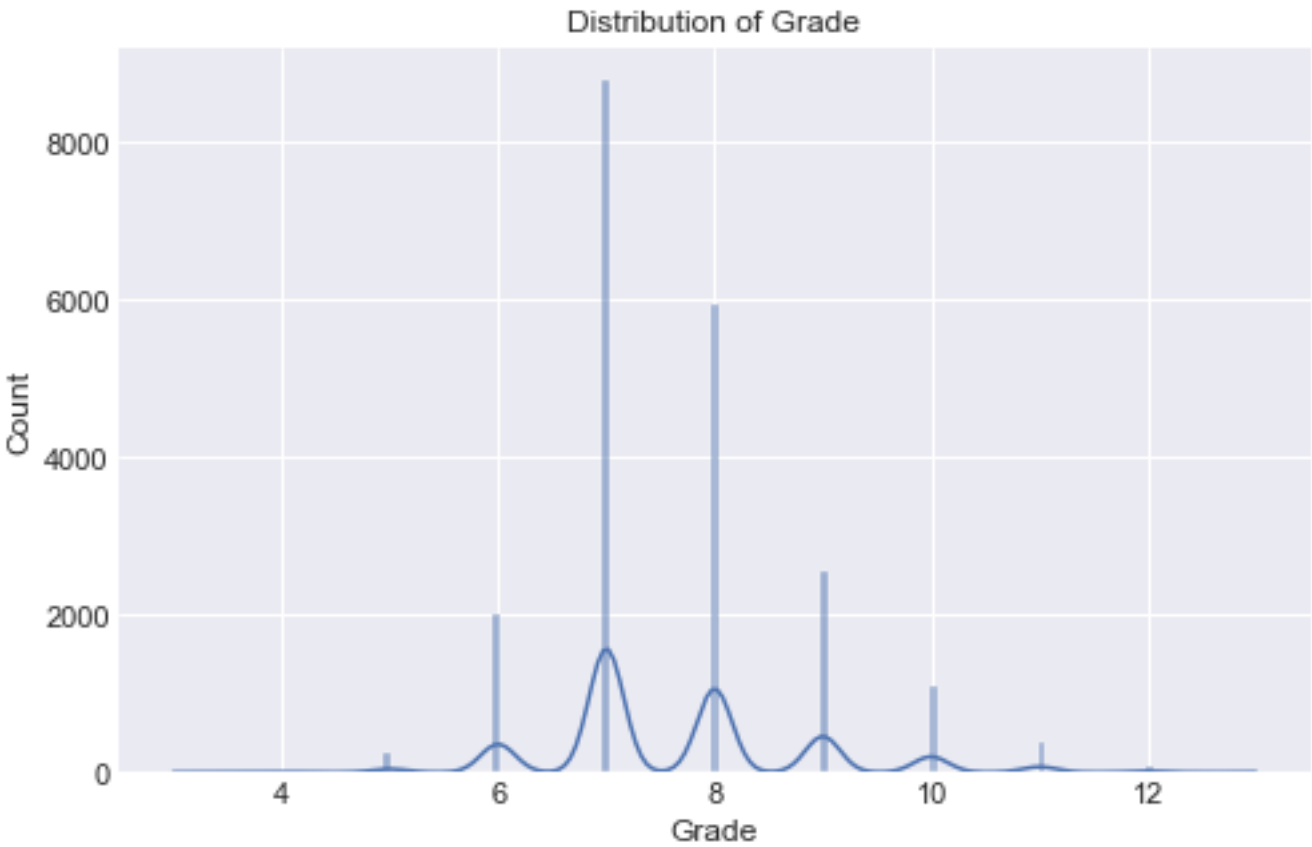
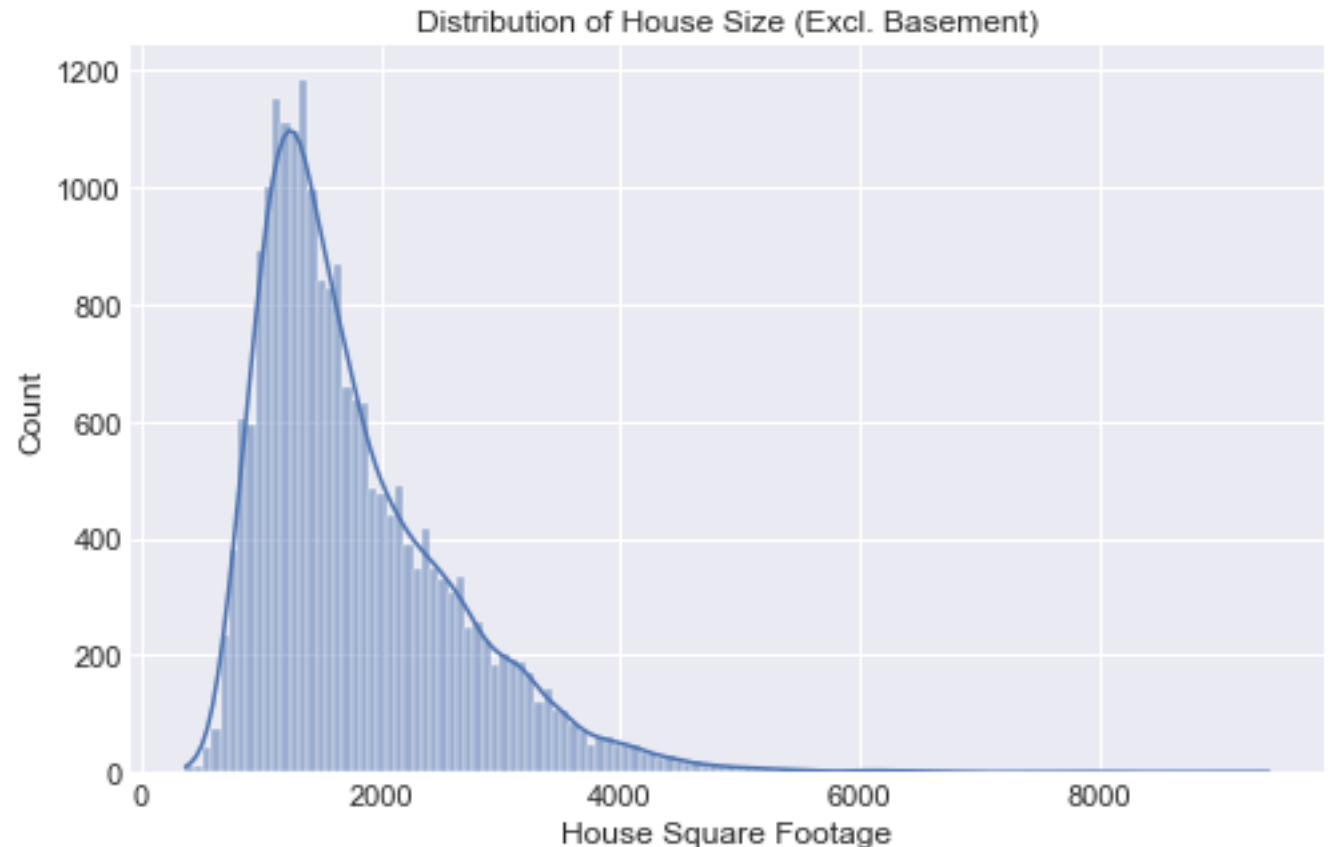
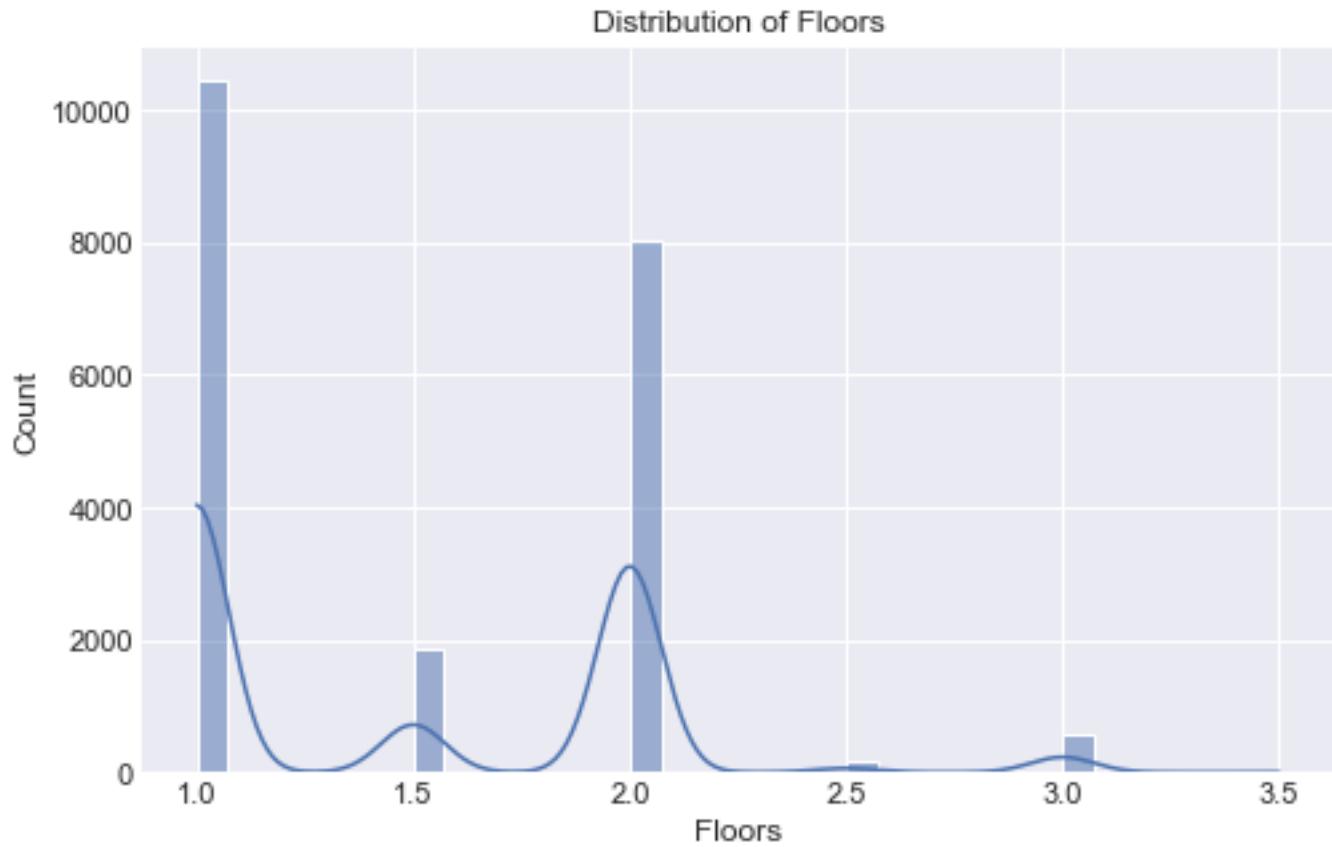
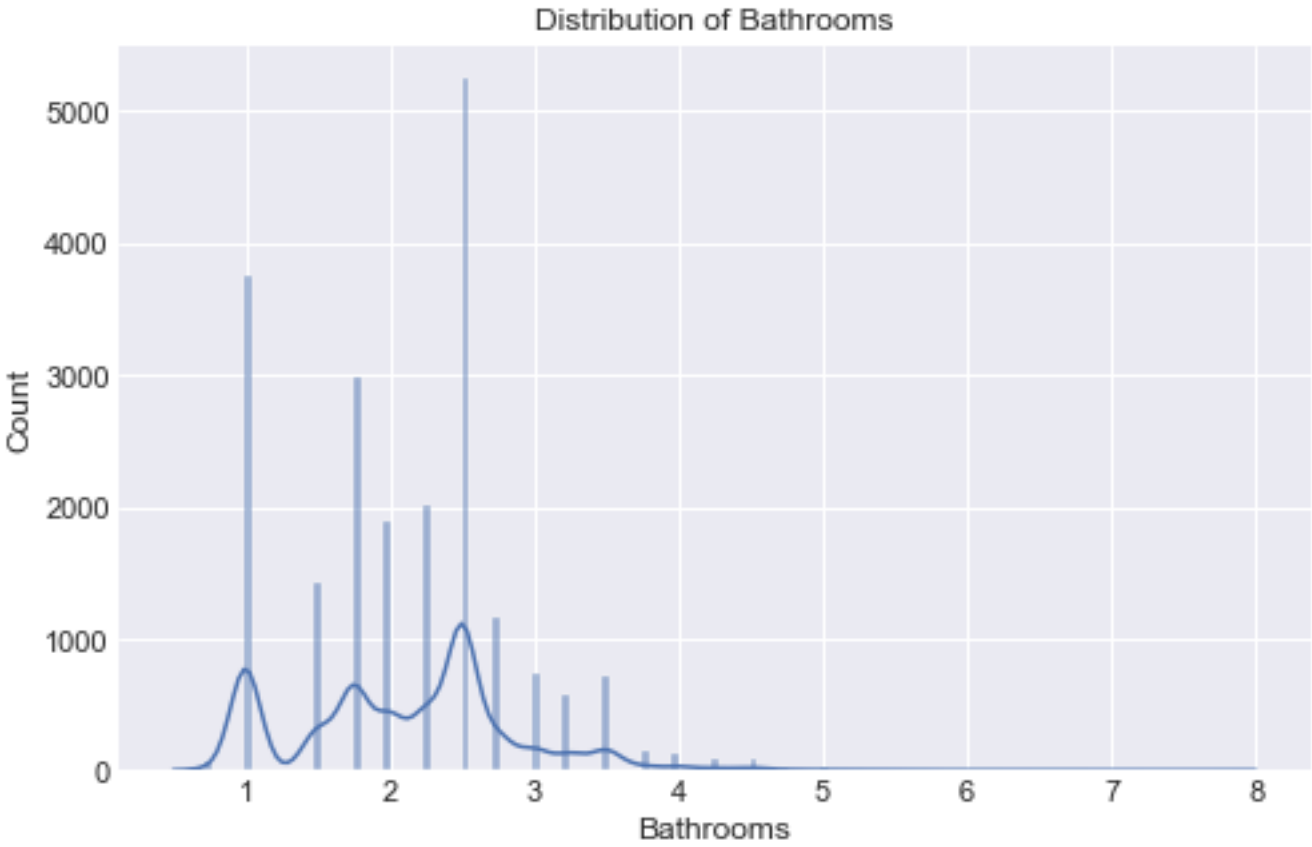
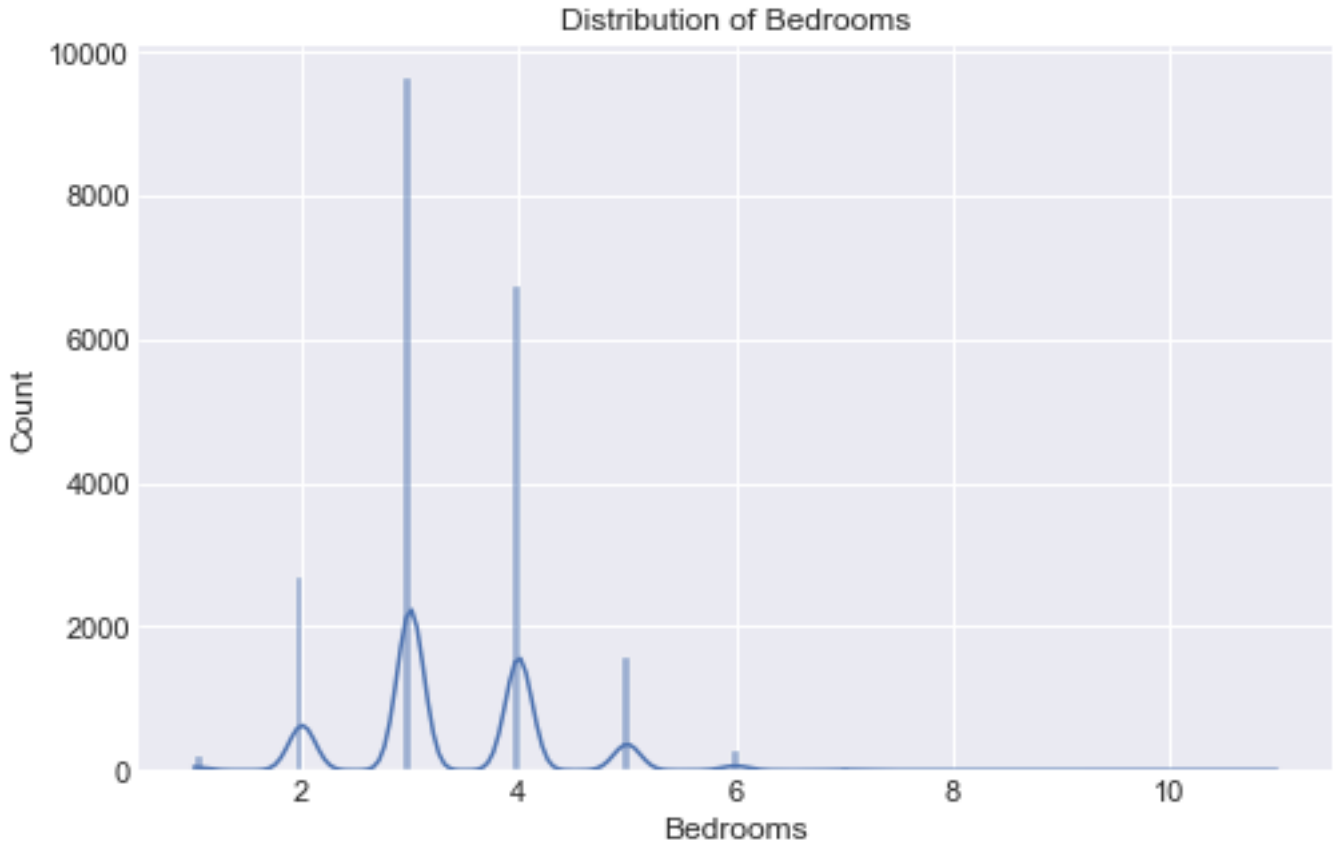
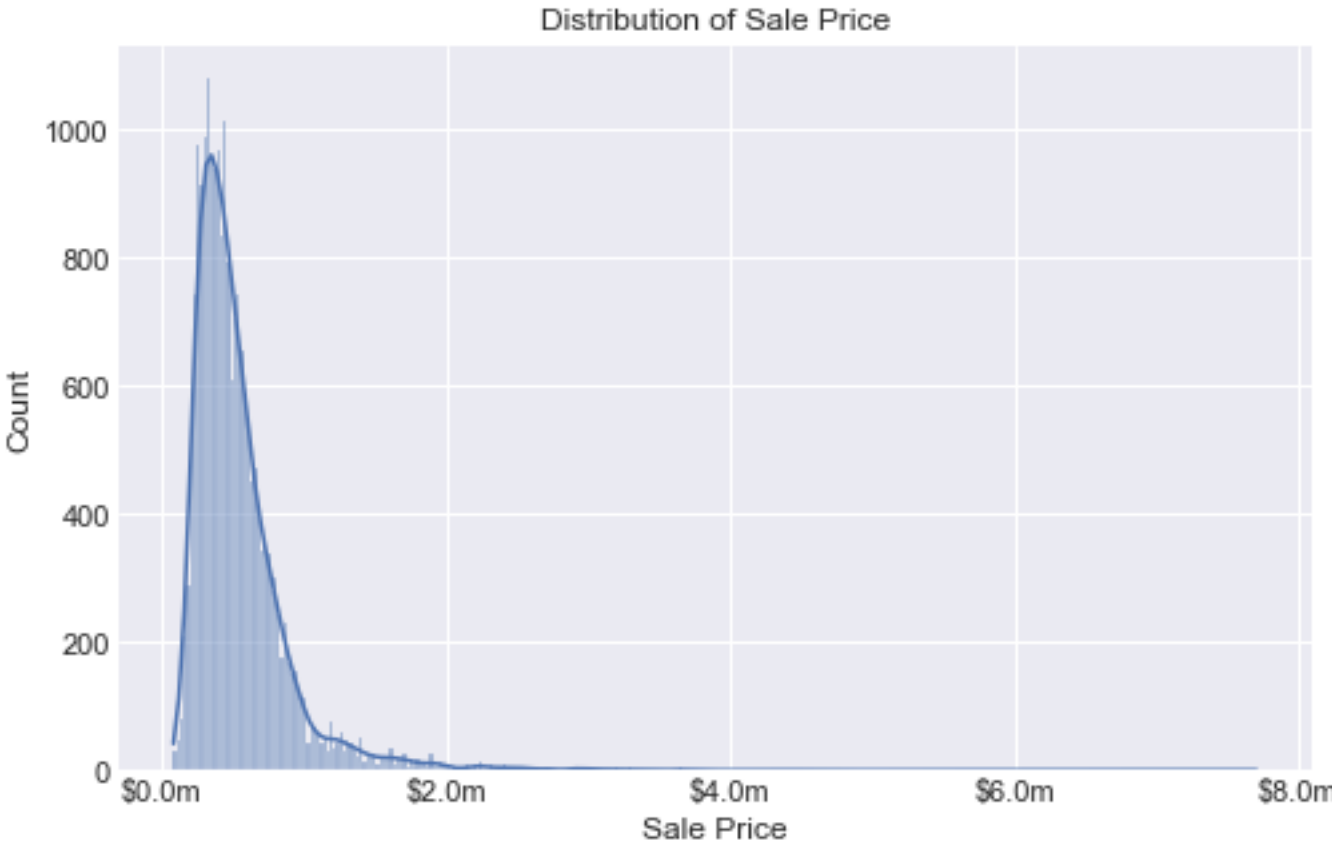
Recommendations

1	When purchasing homes, target the purchase of larger homes, with latitude degree coordinates within 47.6 to 47.7.
2	When selling assets, target selling during the spring months, as April, May, and June were correlated with the highest sale prices.
3	Property management - given renovations and square footage being positively correlated with sale price, renovations or expansions to existing homes can help drive increases in value.
4	When performing due diligence processes to validate purchase of an asset, if time is short or decisions need to be made quickly, KC provided grade metric has been shown to be a strong predictor of sale price. If other information is limited or decisions need to be made quickly, grade can likely be used instead.

Initial Findings

King's County Housing Market

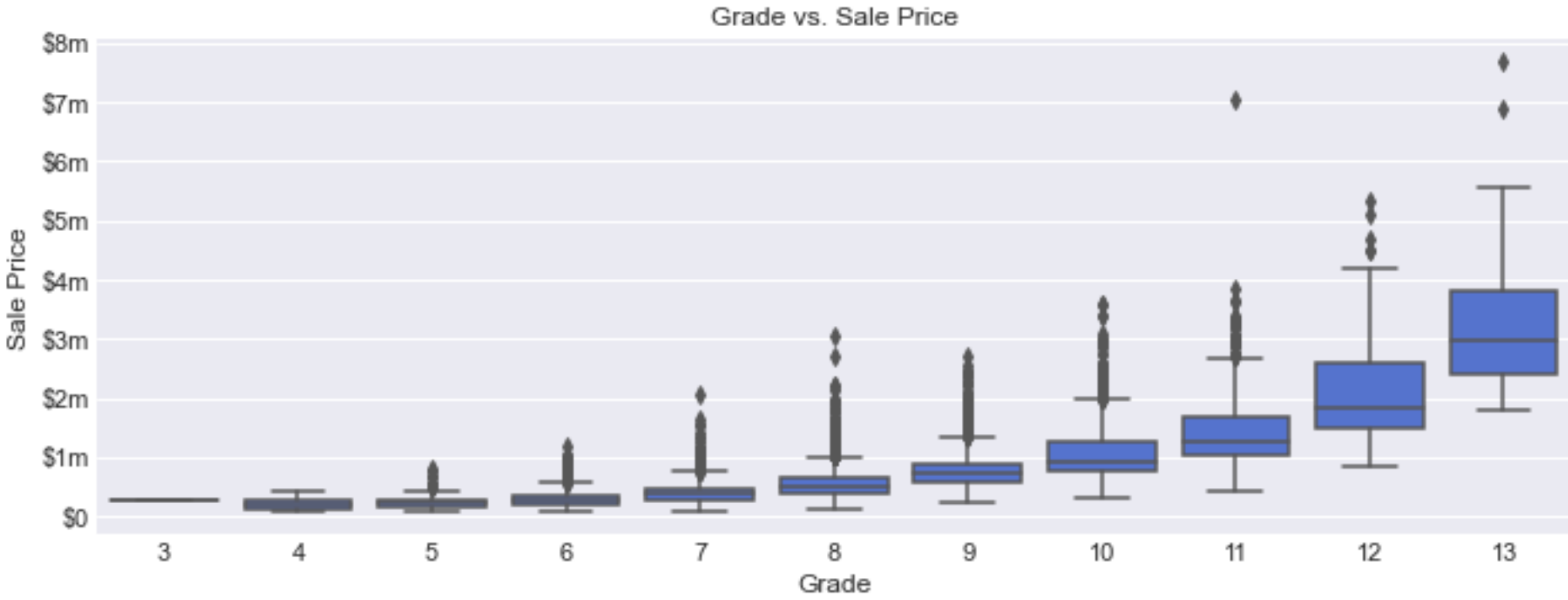
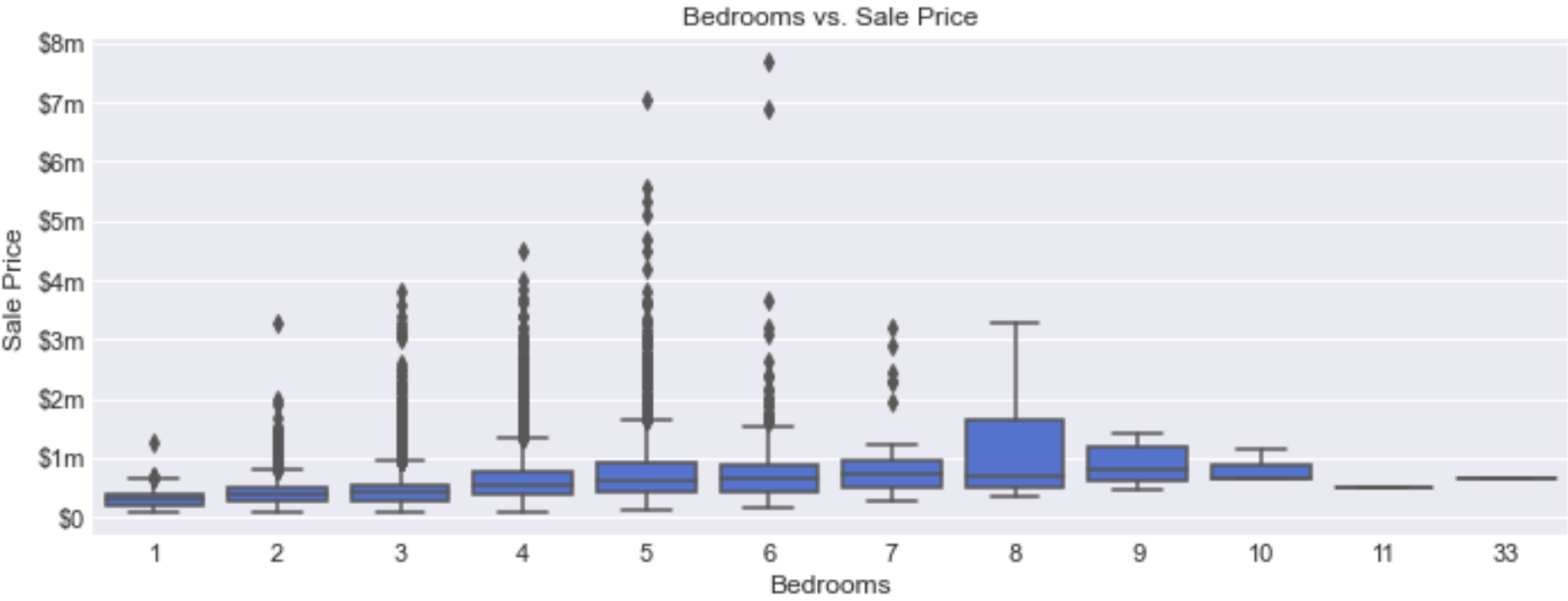
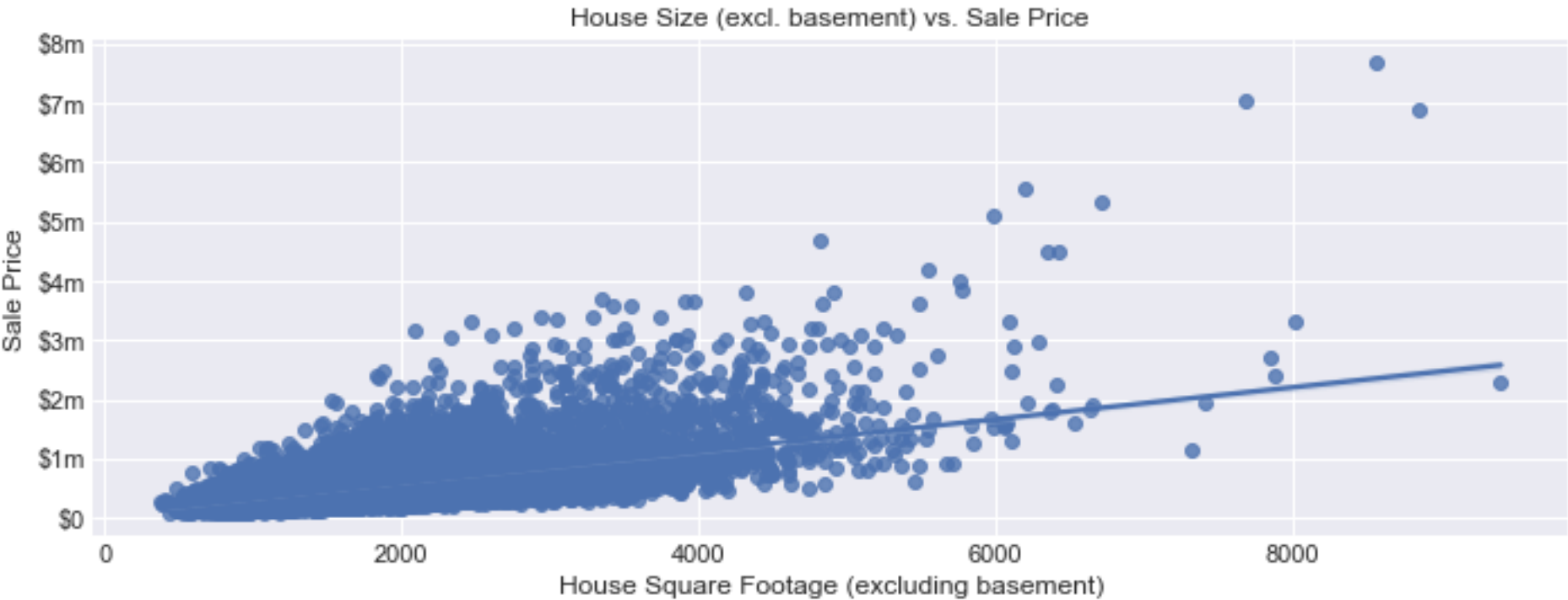
Distributions of Popular Variables



Initial Findings

King's County Housing Market

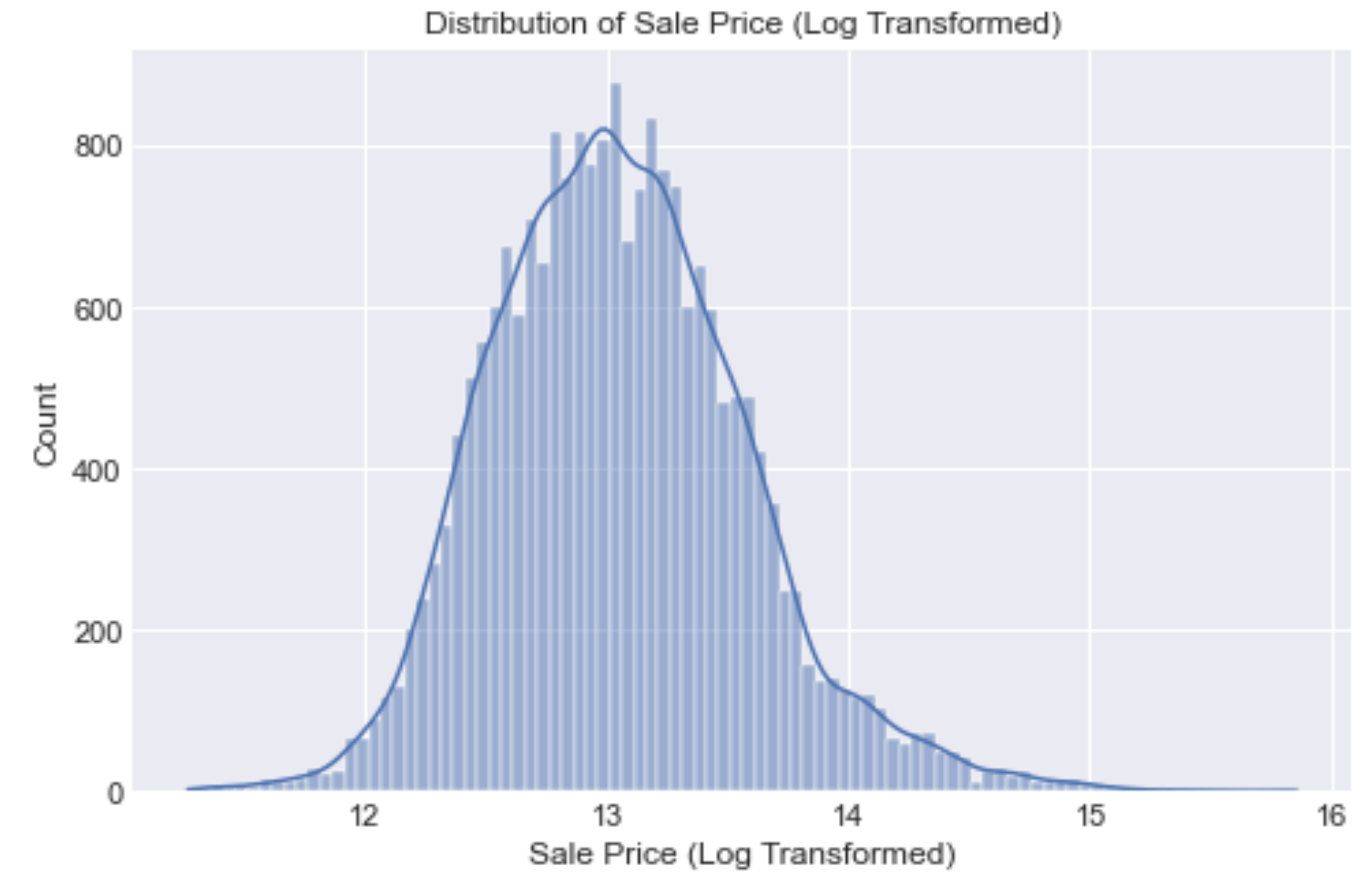
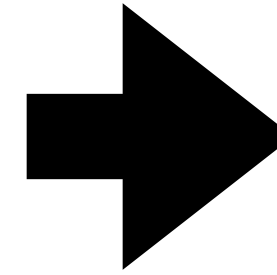
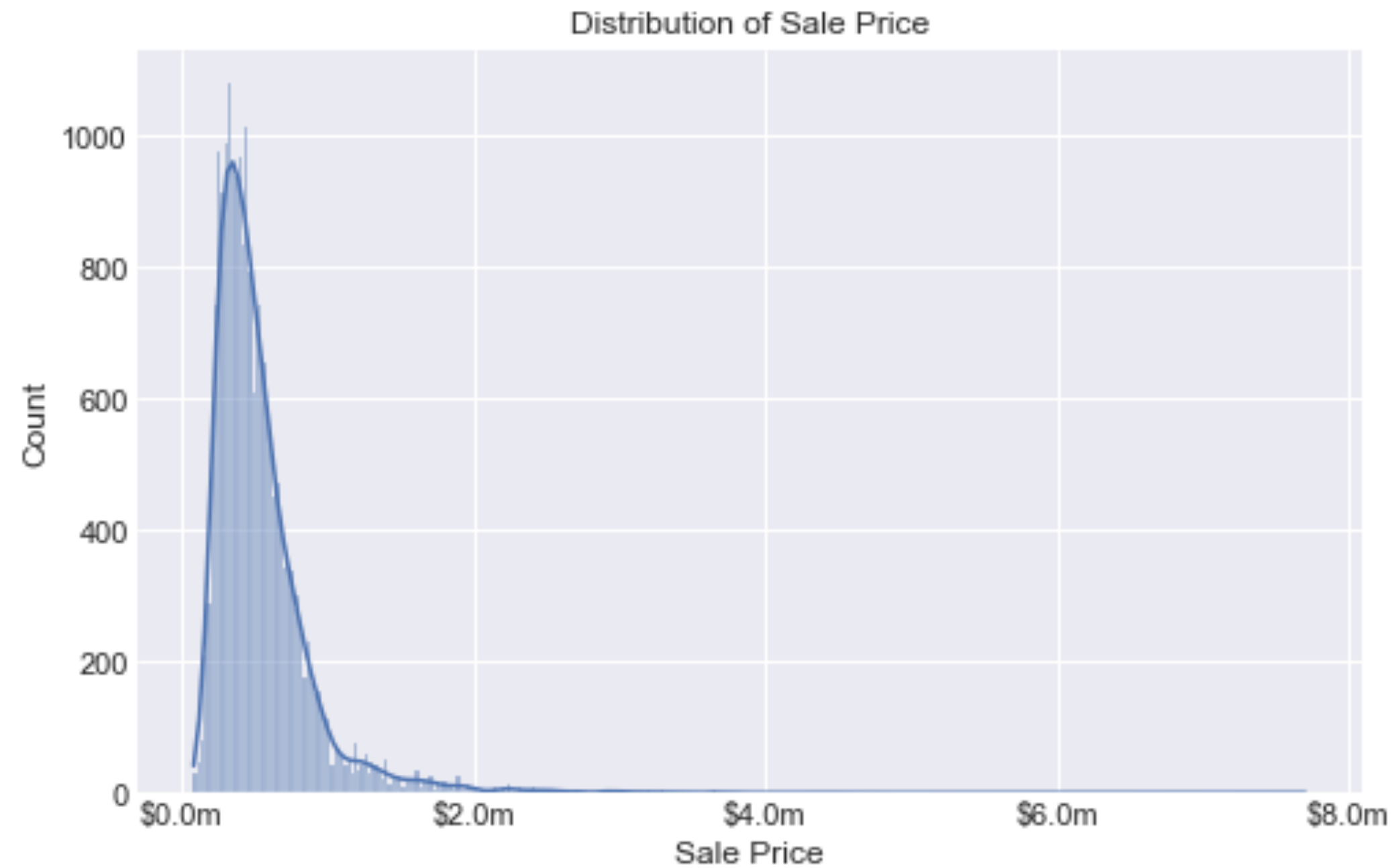
House Features and Relationships to Price



Methodology

Regression on Log-Transformed Price

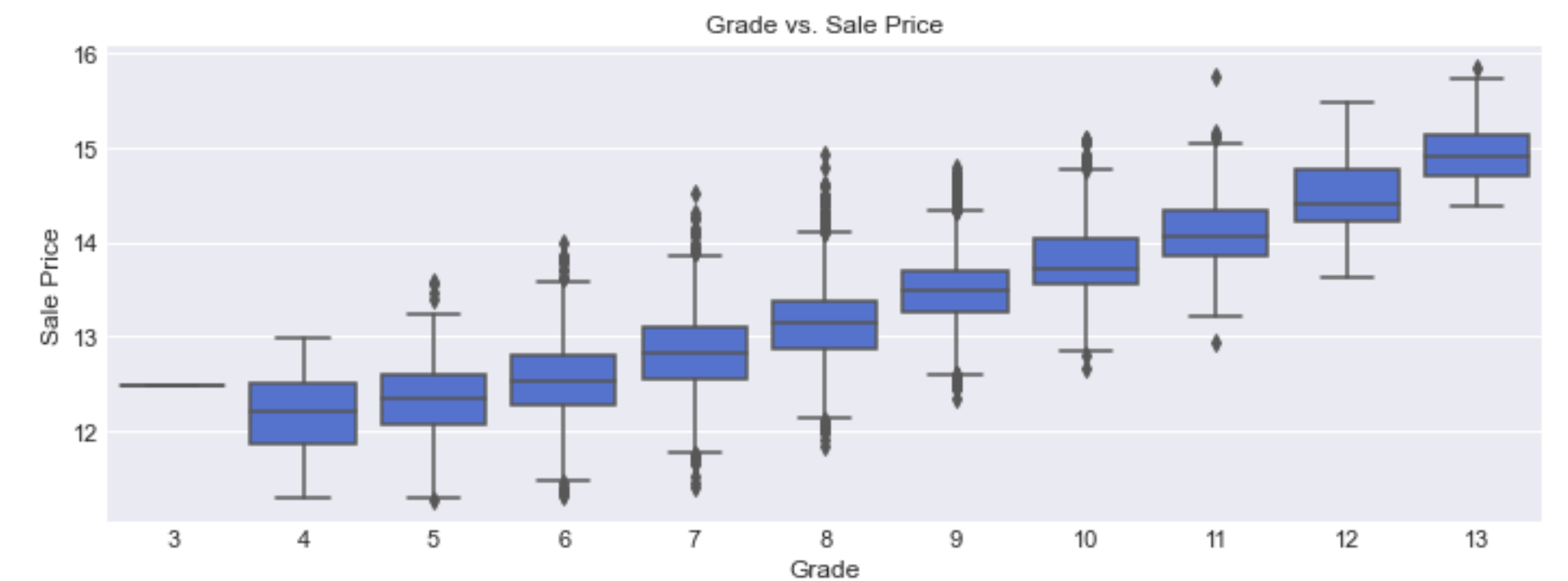
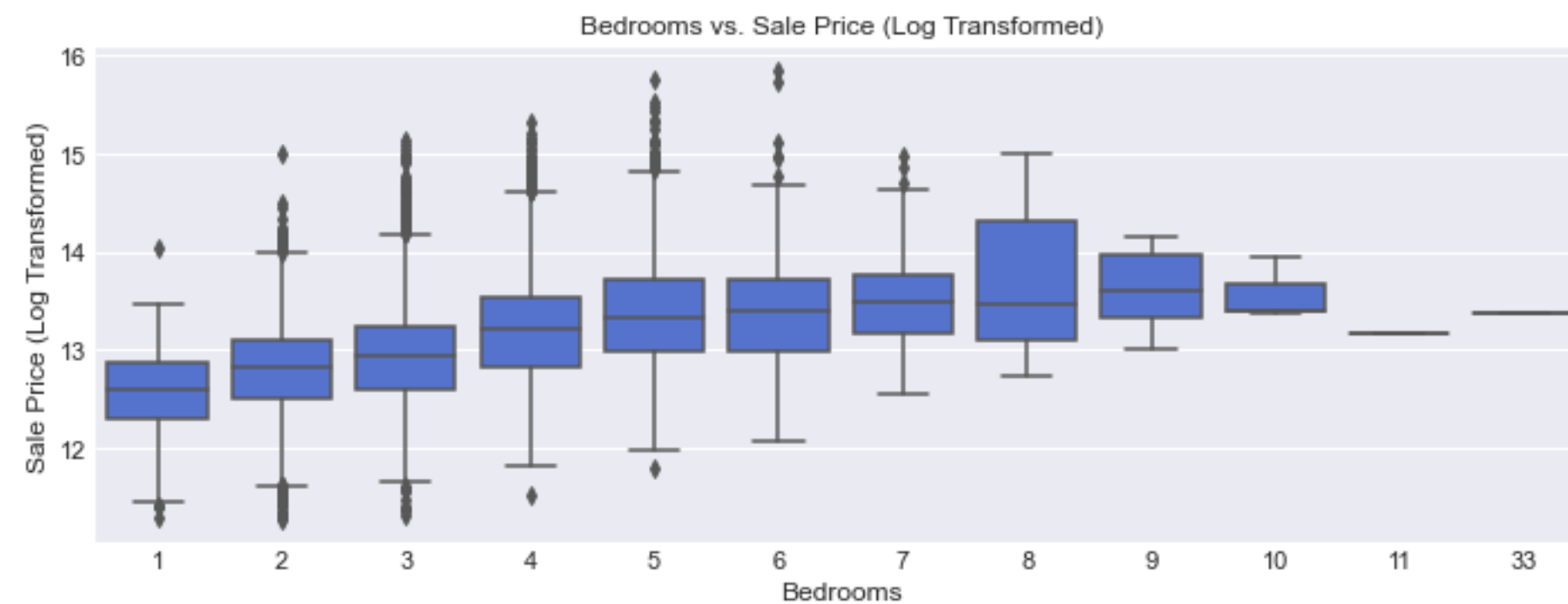
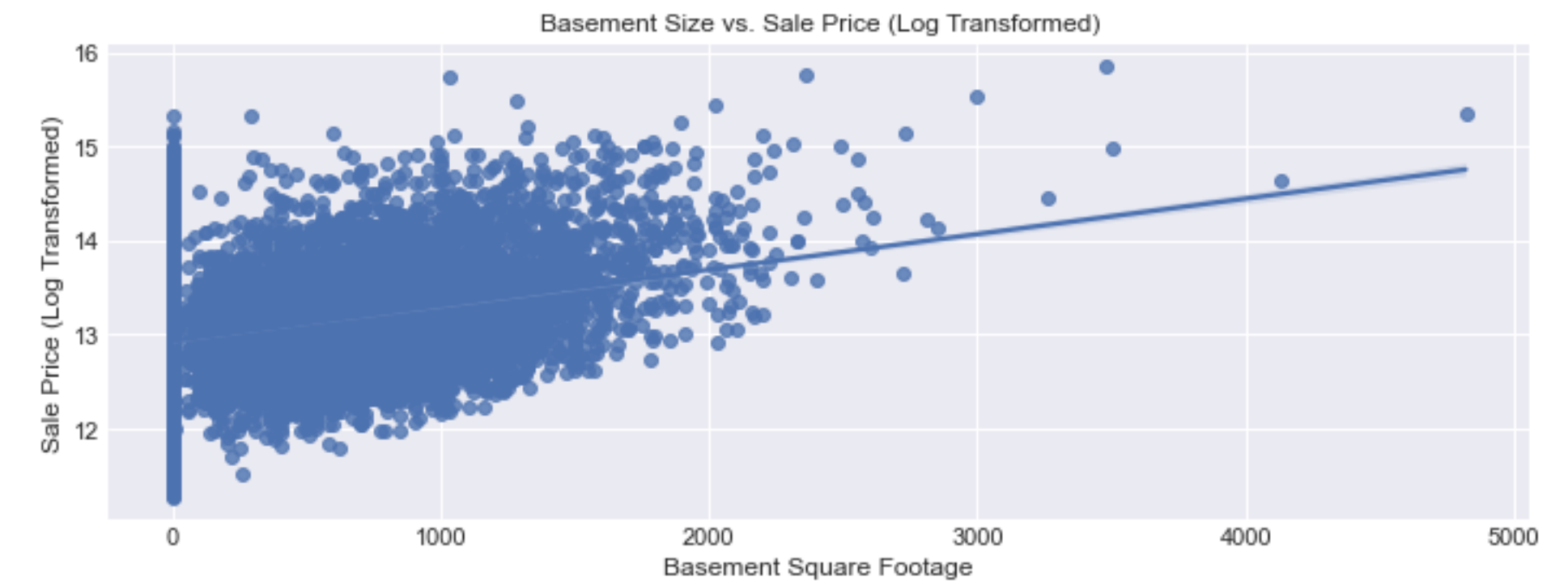
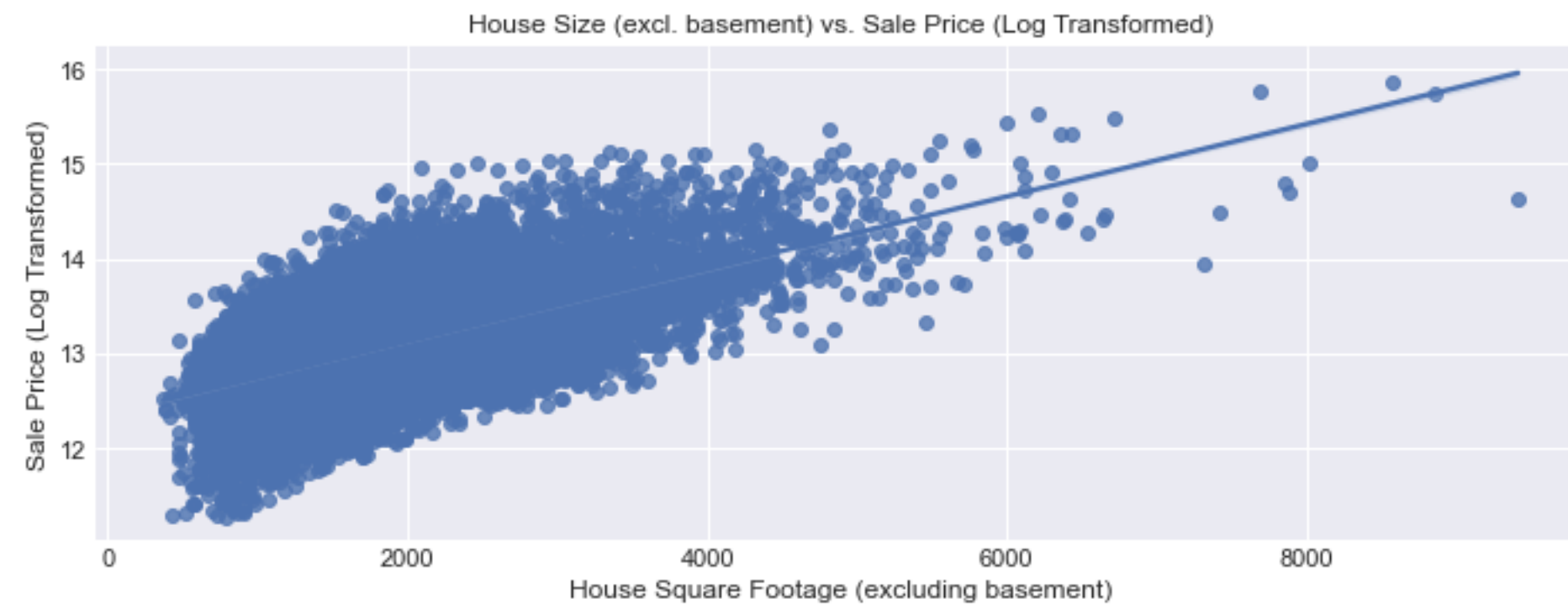
Transforming Price



Methodology

King's County Housing Market

Transformed Variables vs. Transformed Price Shows Improved Results



Final Model & Predictors

Regression Results and Verifying Assumptions

Regression Results & Summary

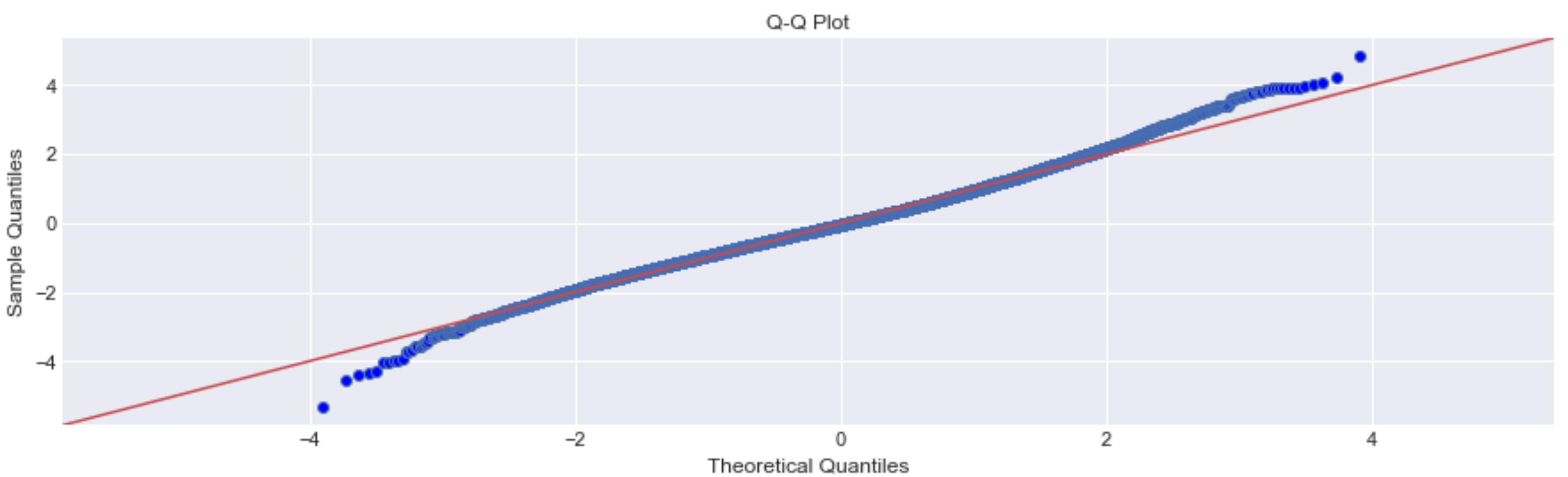
OLS Regression Results

Dep. Variable:	log_price	R-squared:	0.716
Model:	OLS	Adj. R-squared:	0.716
Method:	Least Squares	F-statistic:	8841.
Date:	Wed, 23 Mar 2022	Prob (F-statistic):	0.00
Time:	17:50:42	Log-Likelihood:	-2923.4
No. Observations:	21025	AIC:	5861.
Df Residuals:	21018	BIC:	5916.
Df Model:	6		
Covariance Type:	nonrobust		

	coef	std err	t	P> t	[0.025	0.975]
const	-57.9033	0.668	-86.744	0.000	-59.212	-56.595
sqft_basement	0.0003	4.68e-06	57.057	0.000	0.000	0.000
sqft_above	0.0002	3.79e-06	56.456	0.000	0.000	0.000
lat	1.4558	0.014	103.382	0.000	1.428	1.483
grade	0.1623	0.003	60.584	0.000	0.157	0.168
1-waterfront	0.6397	0.024	26.715	0.000	0.593	0.687
1-reno	0.1801	0.011	16.947	0.000	0.159	0.201

Omnibus:	446.375	Durbin-Watson:	1.991
Prob(Omnibus):	0.000	Jarque-Bera (JB):	670.342
Skew:	0.230	Prob(JB):	2.74e-146
Kurtosis:	3.744	Cond. No.	6.87e+05

Q-Q Plot to Check Distribution of Residuals



Residual Plot to Check for Heteroscedasticity

