

King's County Housing Data

An Exploration of the Predictors of House Pricing



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O.S.E.M.N. Process

Obtain Data

Scrub Data

Explore Data

Model Data

Nterpret Data

A vertical photograph on the left side of the slide shows a rugged coastline. A steep, forested cliff meets a sandy beach and the ocean. The water is a light greenish-blue, and the sky is overcast.

Building the Model

Histograms & KDE's

Scatter, QQ plots, plotted residuals

Simple linear regression

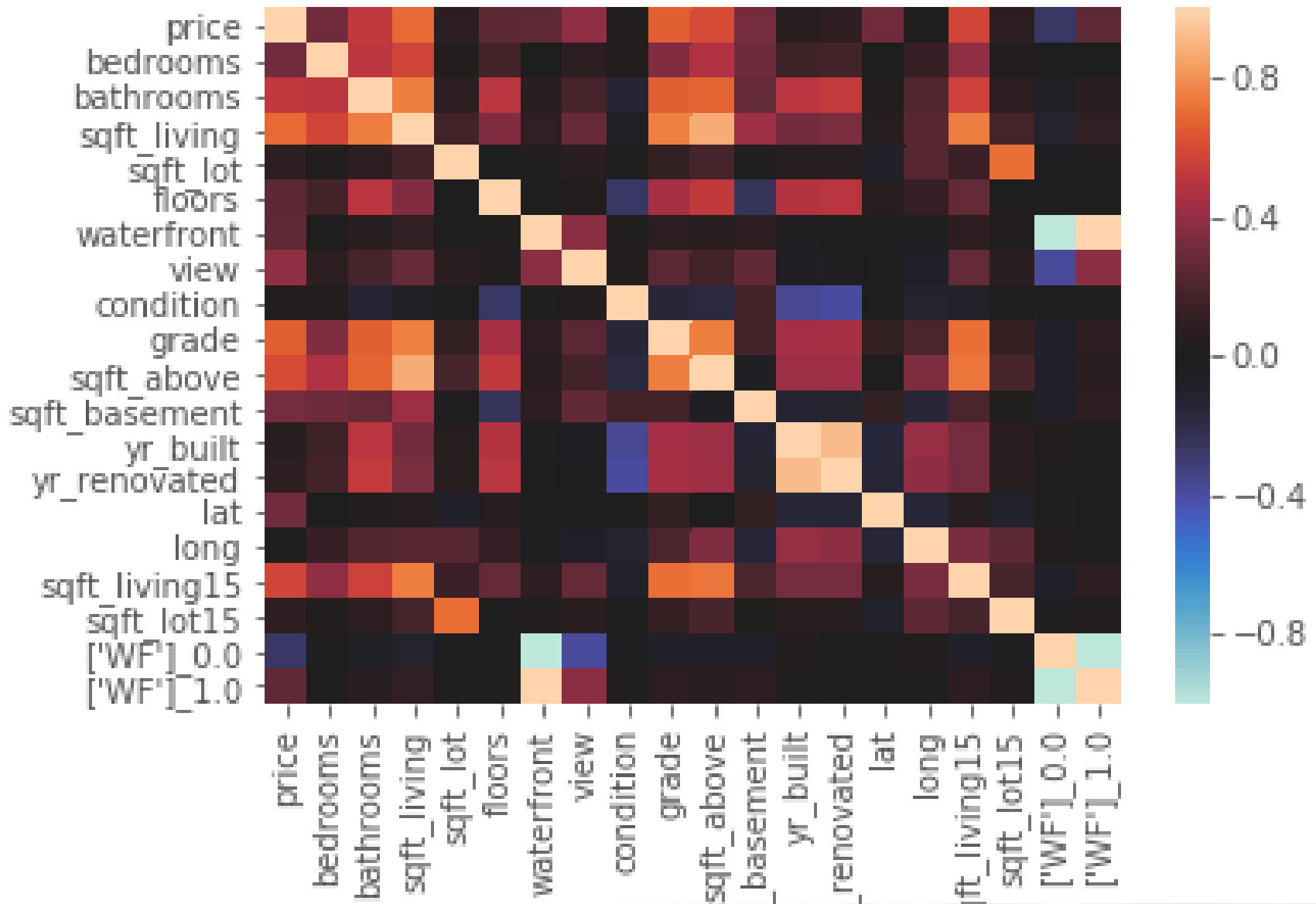
Heatmap for collinearity

Normalizing data

Grade, sqft_living, view, condition, lat,
yr_renovated, floors, sqft_living15

Highest correlations with Price:
Sqft_living, grade, bedrooms,
bathrooms

Heat Map



Results of our Model

OLS Regression Results

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Dep. Variable:	price	R-squared:	0.752			
Model:	OLS	Adj. R-squared:	0.752			
Method:	Least Squares	F-statistic:	8160.			
Date:	Sun, 28 Oct 2018	Prob (F-statistic):	0.00			
Time:	20:54:22	Log-Likelihood:	-15447.			
No. Observations:	21506	AIC:	3.091e+04			
Df Residuals:	21497	BIC:	3.098e+04			
Df Model:	8					
Covariance Type:	nonrobust					
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	coef	std err	t	P> t	[0.025	0.975]

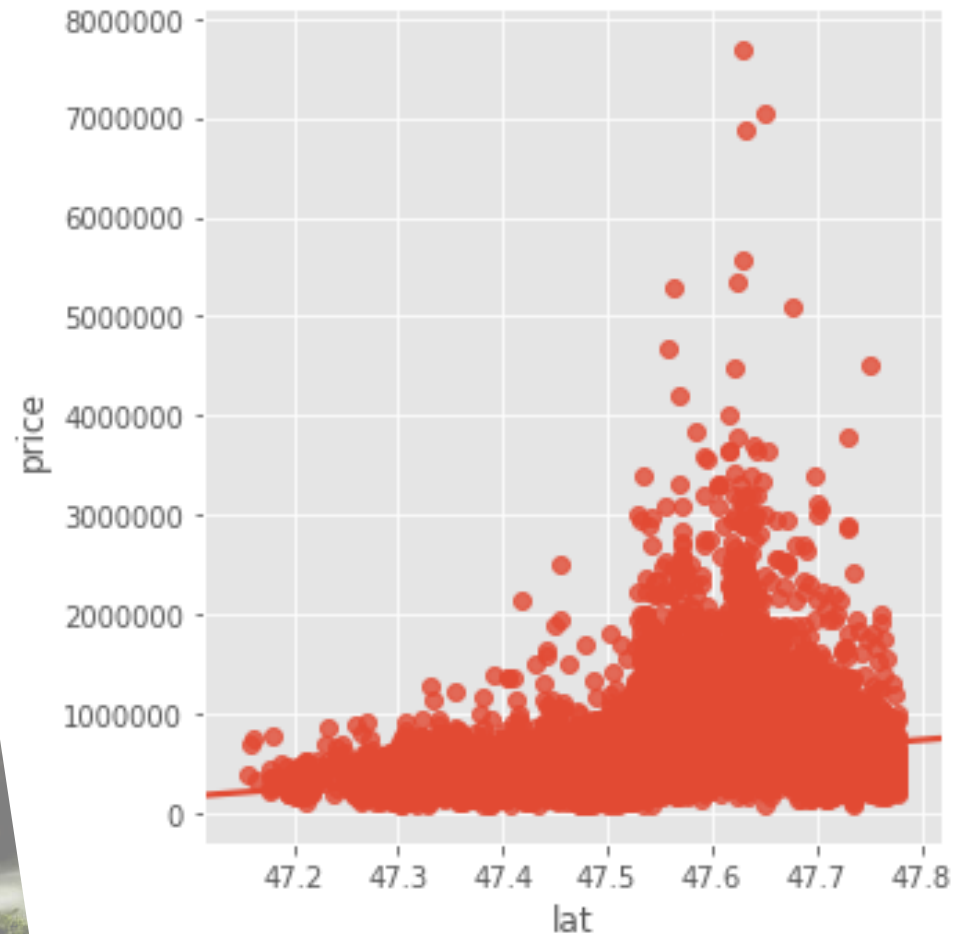
Intercept	-119.0473	1.311	-90.805	0.000	-121.617	-116.478
grade	0.3165	0.005	62.421	0.000	0.307	0.326
sqft_living	0.3014	0.006	52.414	0.000	0.290	0.313
view	0.1771	0.005	37.626	0.000	0.168	0.186
condition	0.1219	0.006	20.920	0.000	0.111	0.133
lat	2.6429	0.025	104.097	0.000	2.593	2.693

Does latitude have an impact on price?

More expensive houses on the north side

No expensive houses on south side

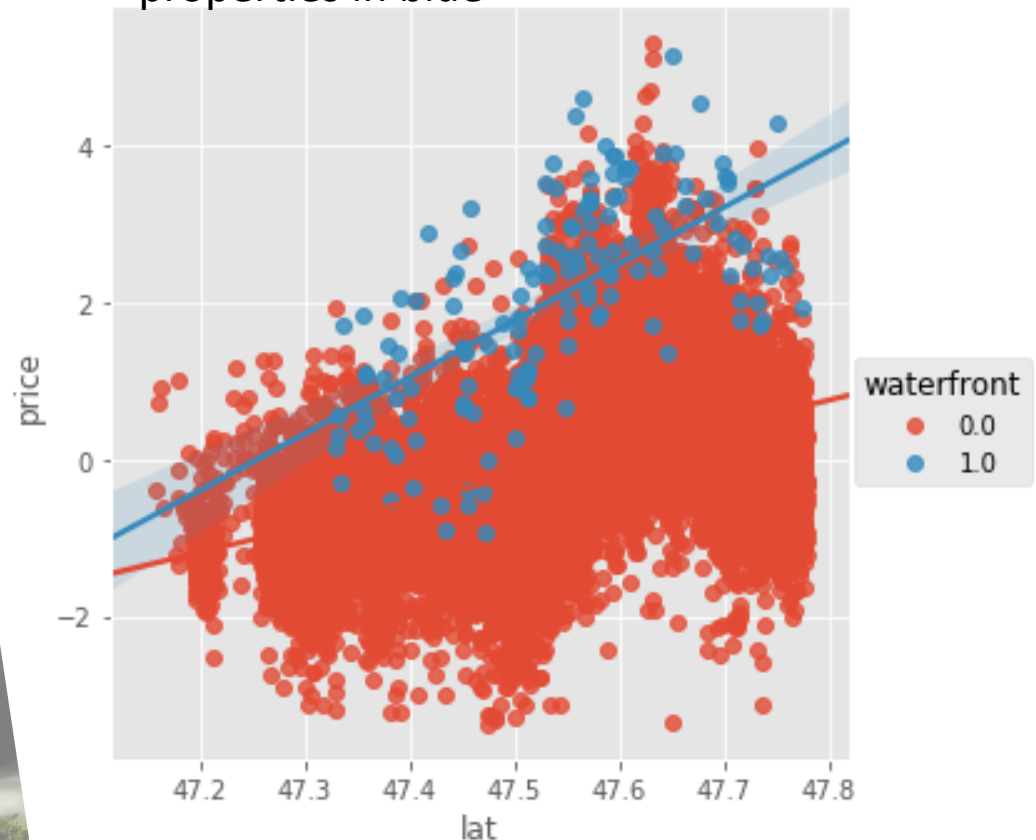
Latitude v. Price Relationship



Do waterfront properties sell for significantly more?

Waterfront houses are on average 3.22 times more expensive

Latitudes price, waterfront properties in blue

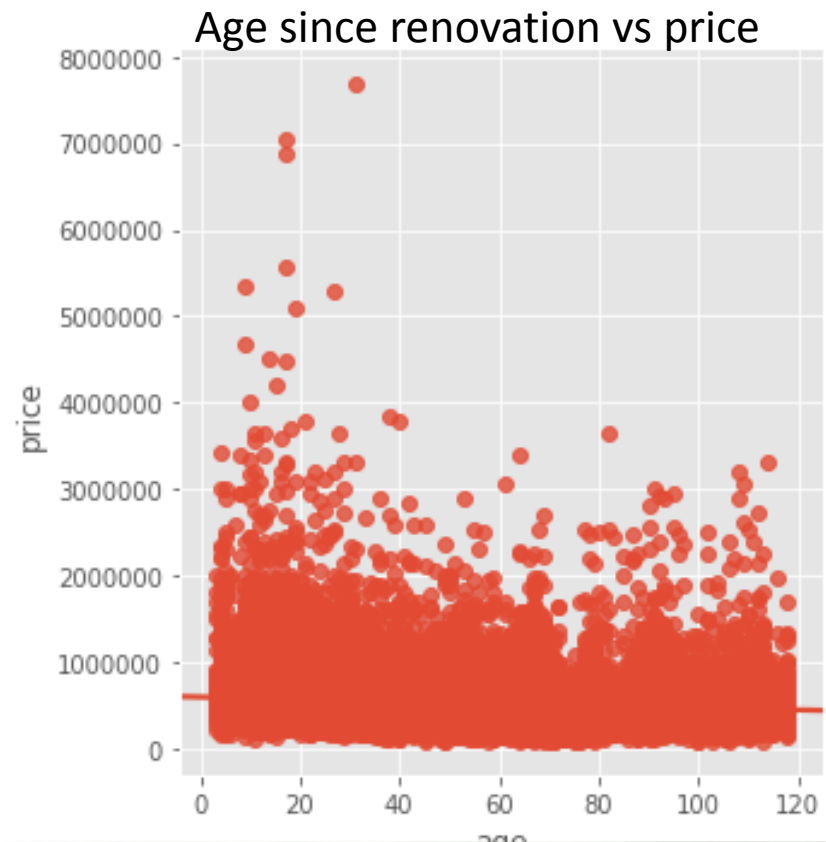


The prices in this graph have been standardized. 0.0 represents a non waterfront house, while 1.0 represents a house on the water

Does renovating your house raise its value significantly?

No significant relationship between renovation and price

Renovation should increase sqft_living to raise price





Conclusions

Location is crucial in determining pricing

Renovation should increase square footage to improve value

The north side of Kings county has more expensive homes

Both North and South side have more expensive houses towards the middle

Waterfront homes are far more expensive