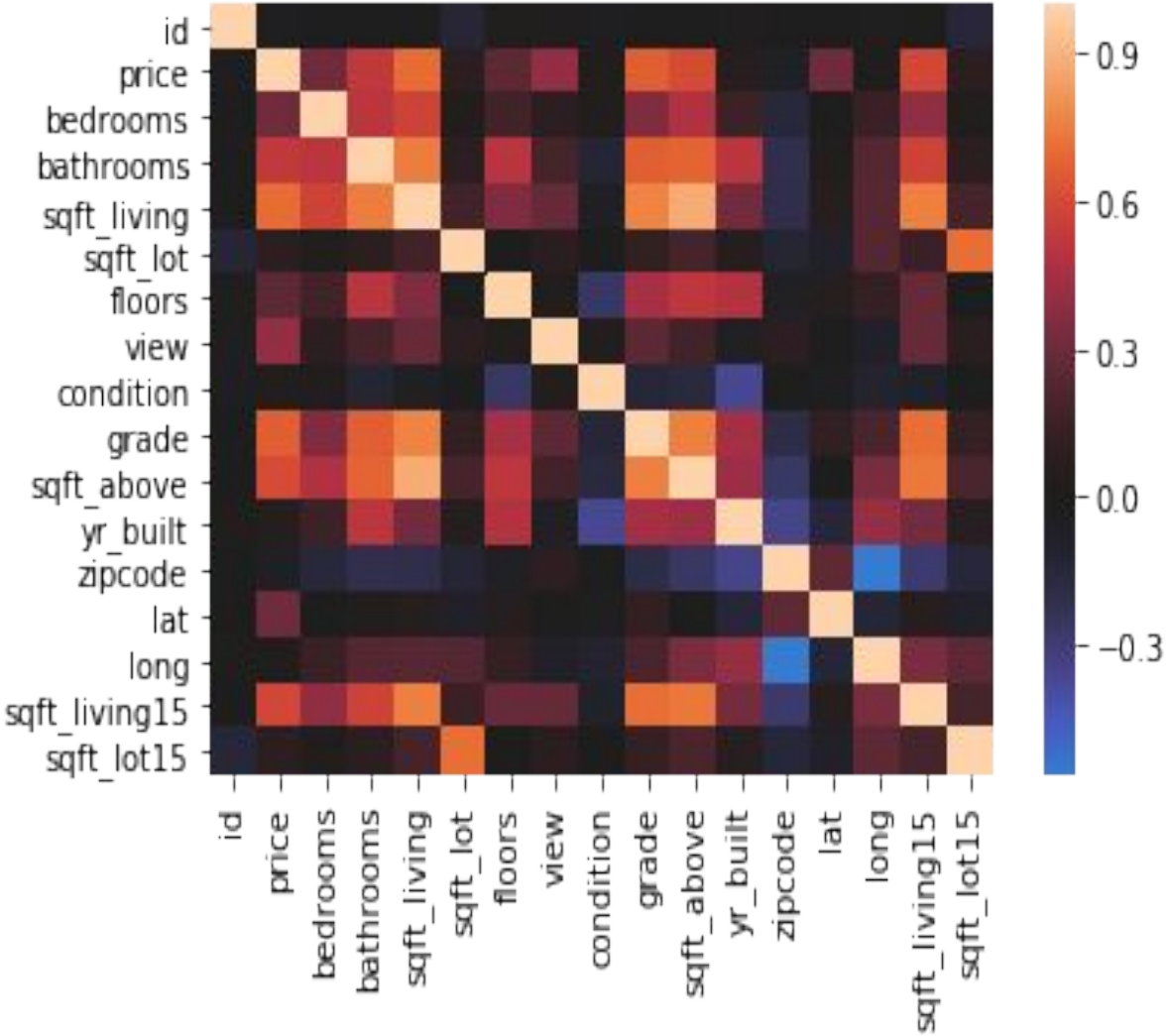
House Prices

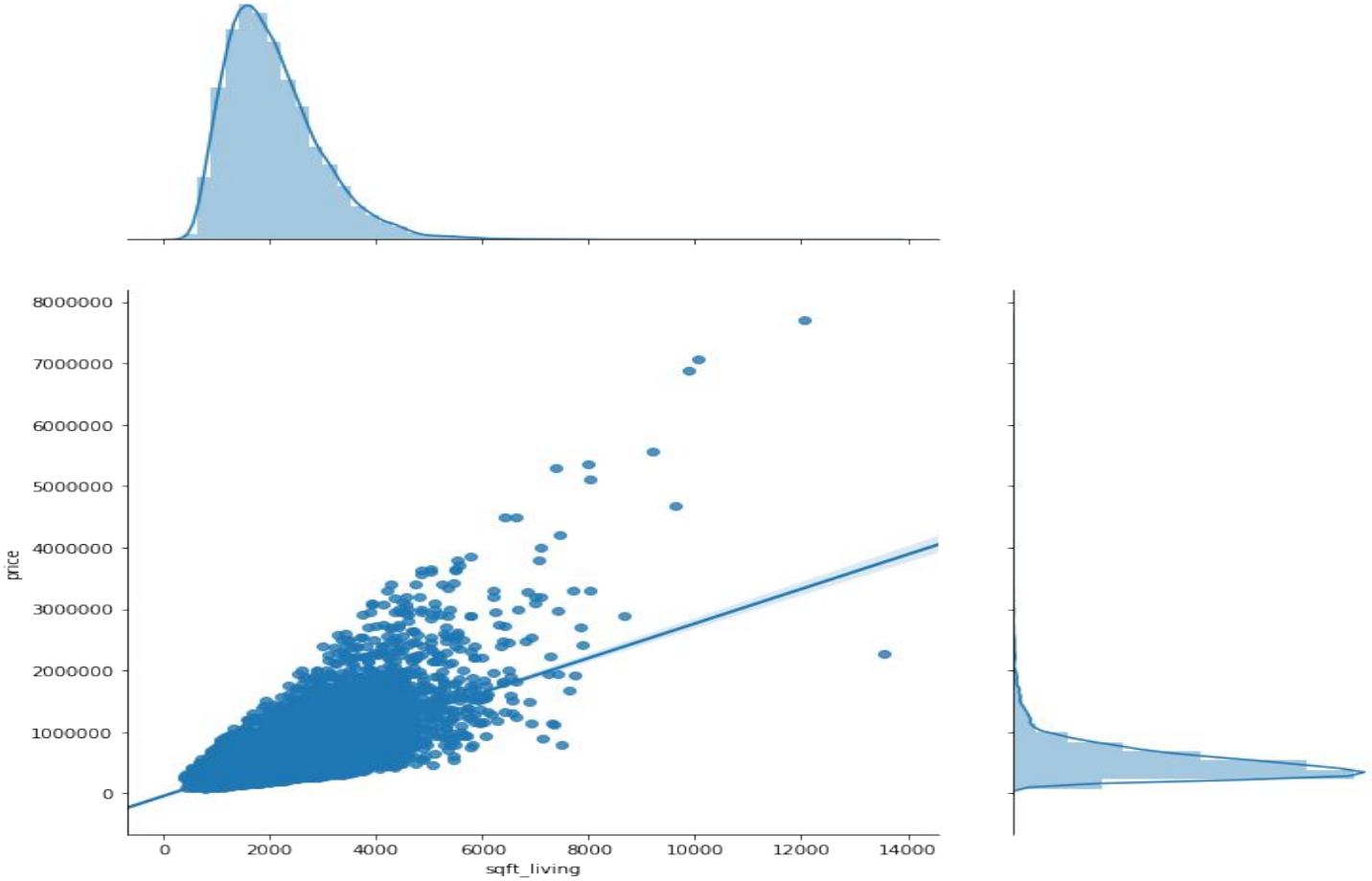
- What is the effect of living area on price?
- What are the other variables have effect on the price?
- Can we formalize it to predict house prices?



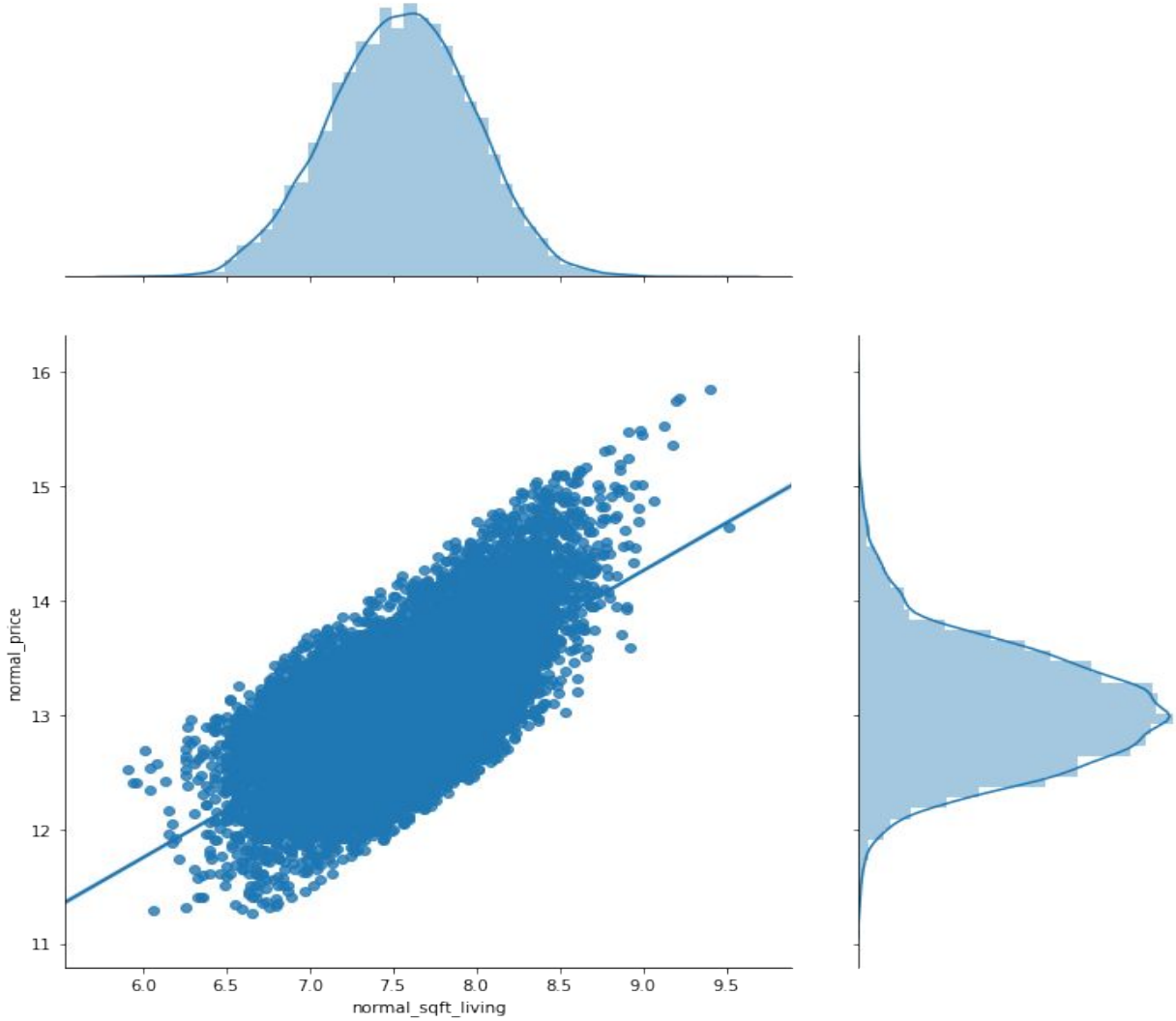
A heatmap shows us the relationship between our target value Price and other variables.

It also indicates the possible multicollinearity between variables that we need to avoid.

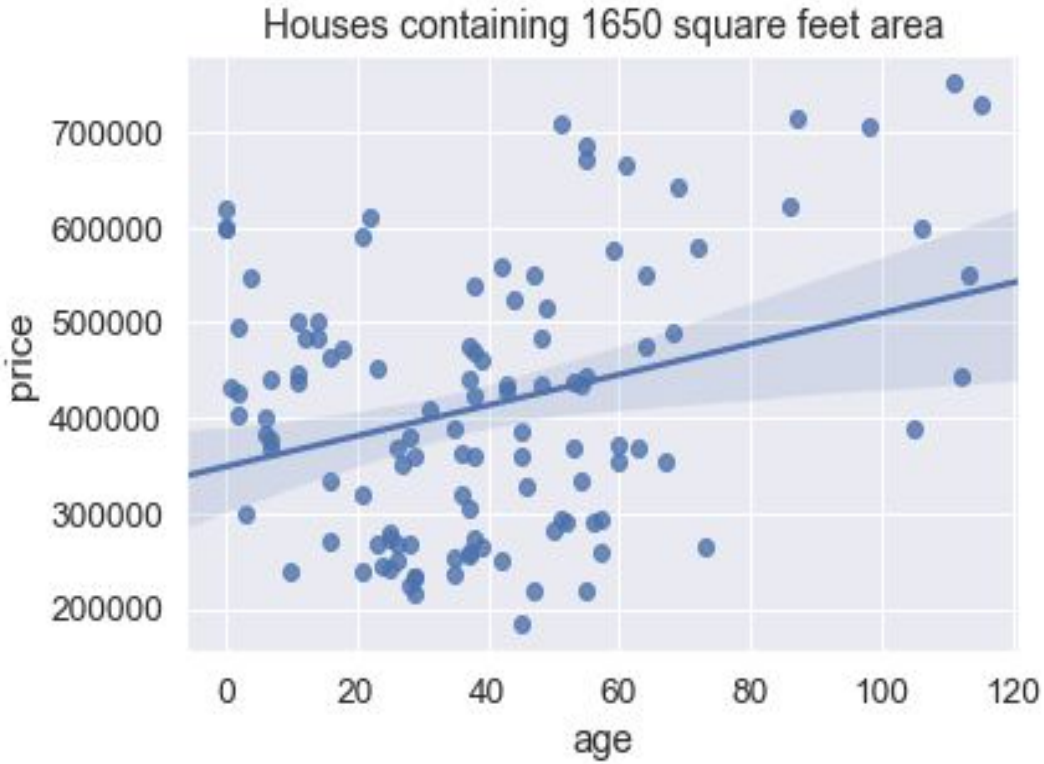
Positive Linear Association between Price and Square ft.

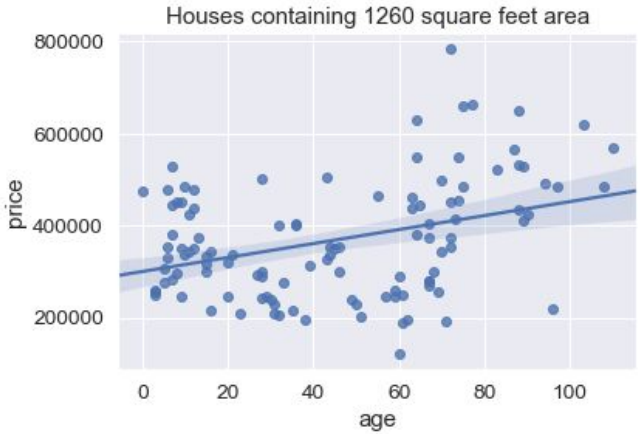


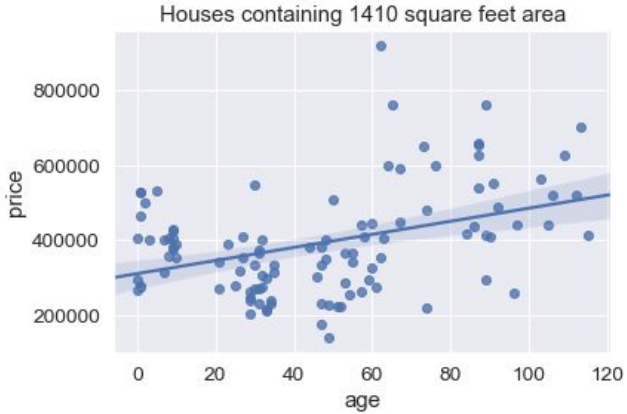
Transforming non-normal variable distribution by applying logarithmic function.

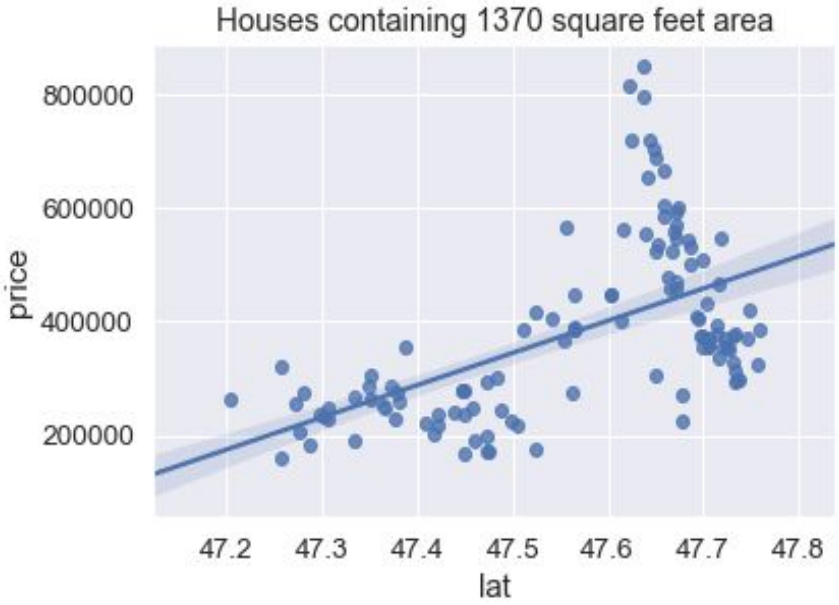


Older houses fetch more money.

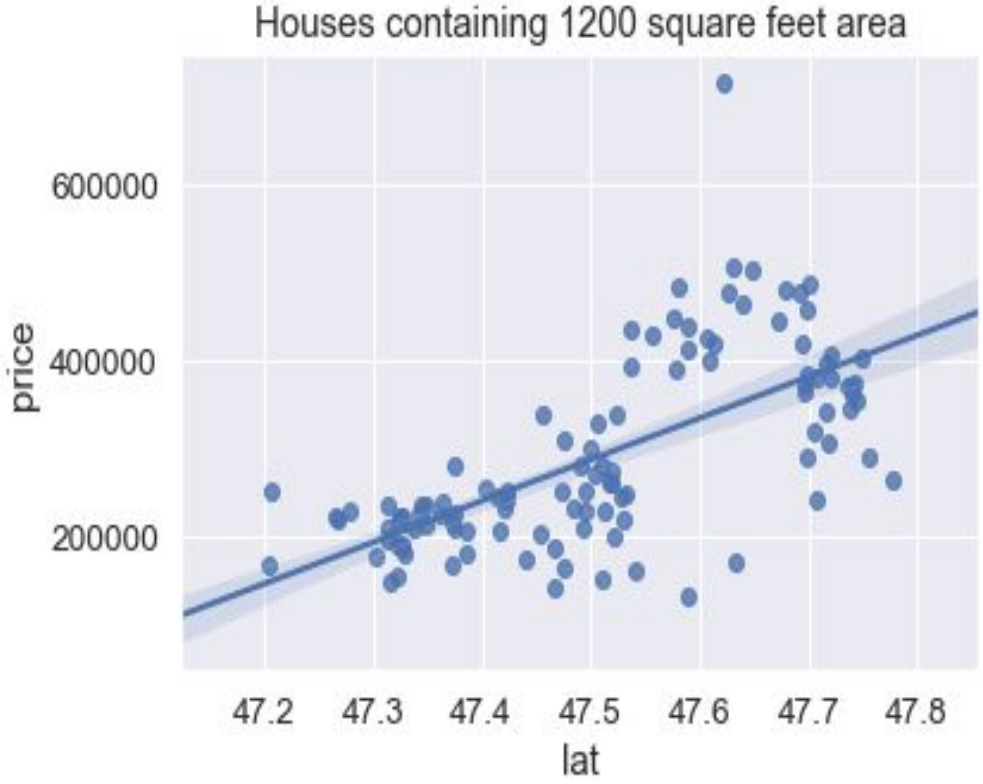








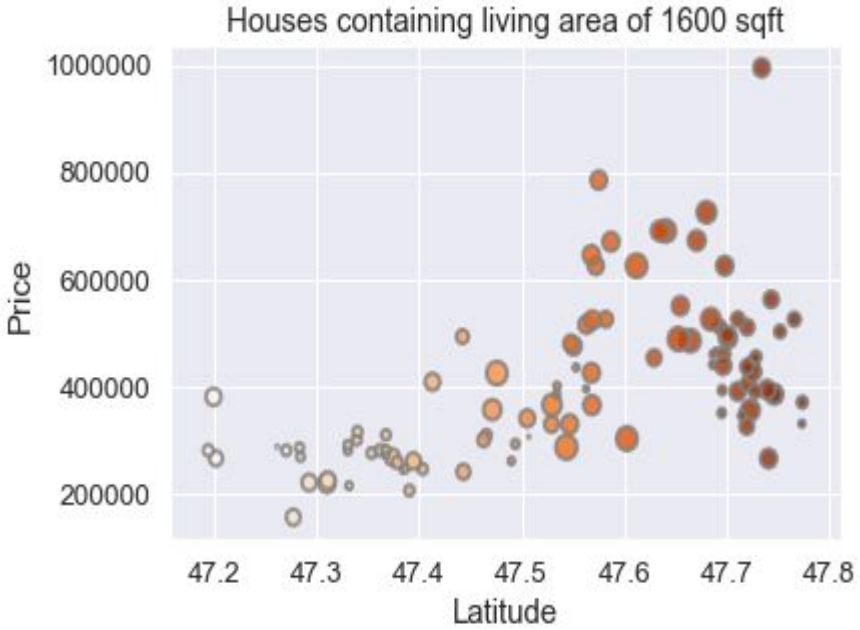
Latitude has greater effect on price.

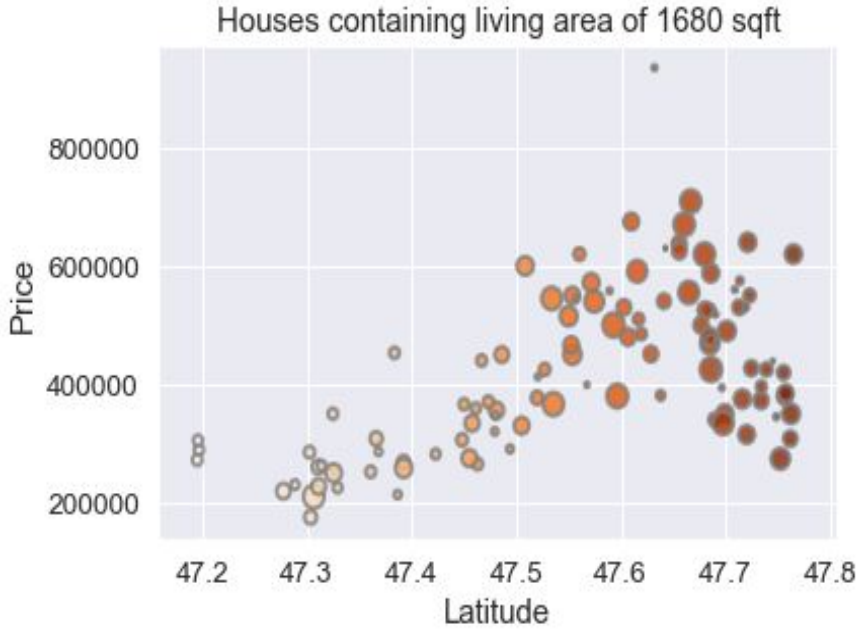


Houses compared to latitude and age

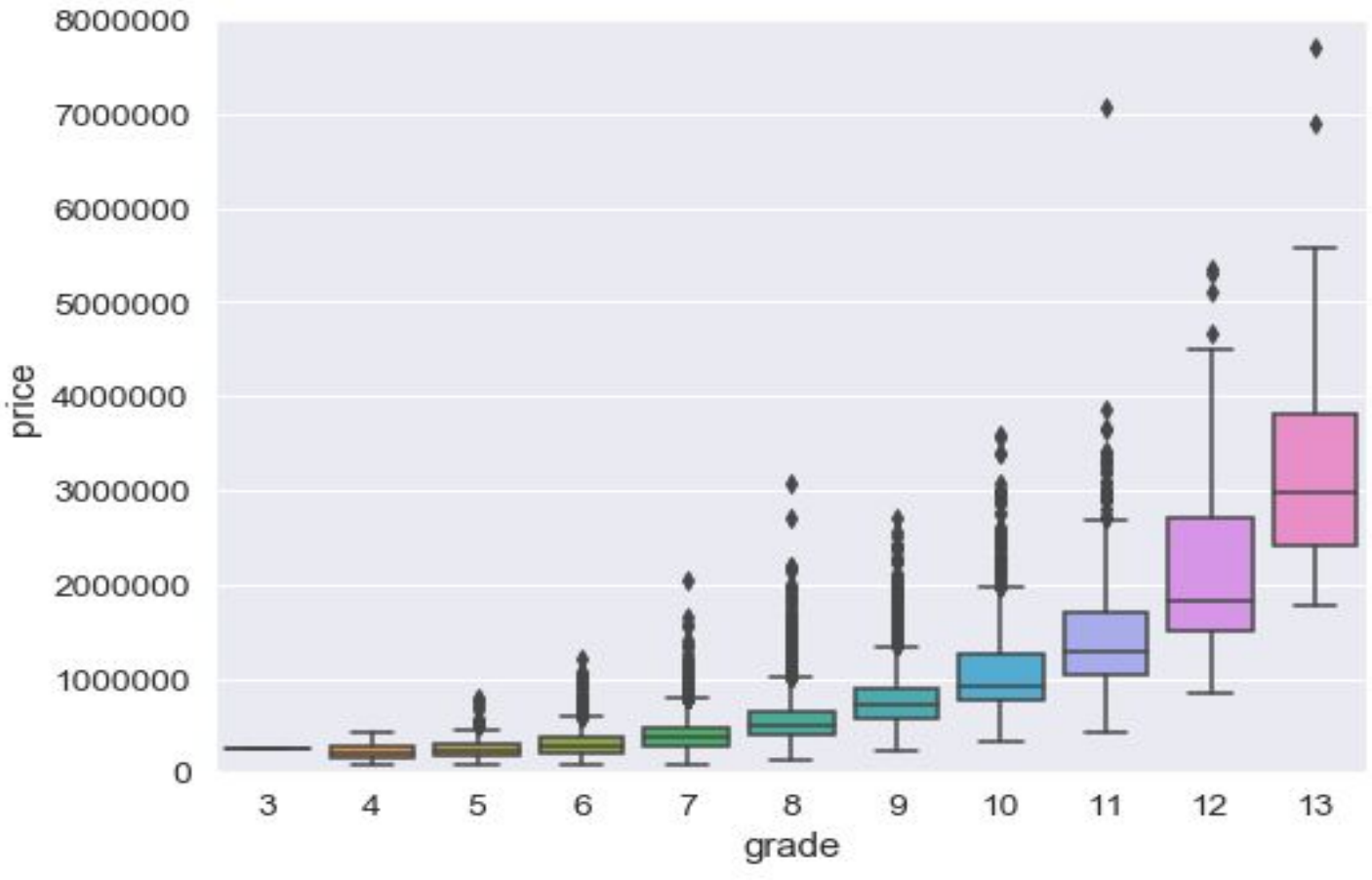
Size : Age

Colour: Latitude





And grade is another variable that has an impact on house prices.



An example to a variable which doesn’t have a strong effect on Price is number of Bedrooms.

Our stats model with

0.733 R-squared value.

OLS Regression Results

Dep. Variable:	normal_price	**R-squared:**	0.733
Model:	OLS	**Adj. R-squared:**	0.733
Method:	Least Squares	**F-statistic:**	1.448e+04
Date:	Wed, 23 Oct 2019	**Prob (F-statistic):**	0.00
Time:	11:54:01	**Log-Likelihood:**	-2496.7
No. Observations:	21126	**AIC:**	5003.
Df Residuals:	21121	**BIC:**	5043.
Df Model:	4		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
const	-55.2976	0.665	-83.117	0.000	-56.602	-53.994
normal_sqft_living	0.4756	0.007	71.762	0.000	0.463	0.489
grade	0.2138	0.003	83.980	0.000	0.209	0.219
age	0.0039	7.34e-05	52.900	0.000	0.004	0.004
lat	1.3236	0.014	94.603	0.000	1.296	1.351

Omnibus:	584.150	**Durbin-Watson:**	1.975
Prob(Omnibus):	0.000	**Jarque-Bera (JB):**	1047.361
Skew:	0.229	**Prob(JB):**	3.70e-228
Kurtosis:	3.990	**Cond. No.**	2.43e+04

Thanks

Ashray

Sez