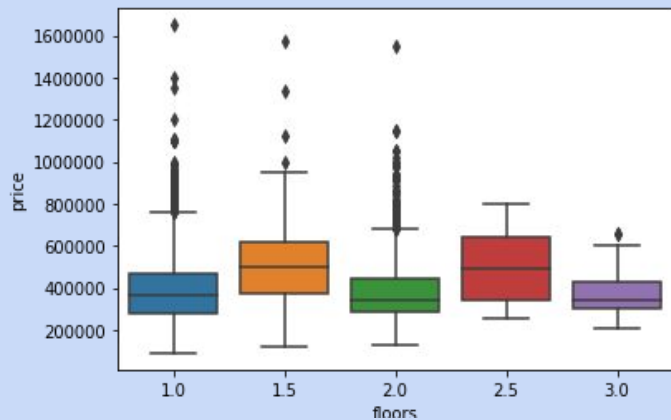# Bellevue

Estates

Our focus

1. Selling waterfront properties - higher end of property market

2. Selling grade 7 properties - lower end of the property market
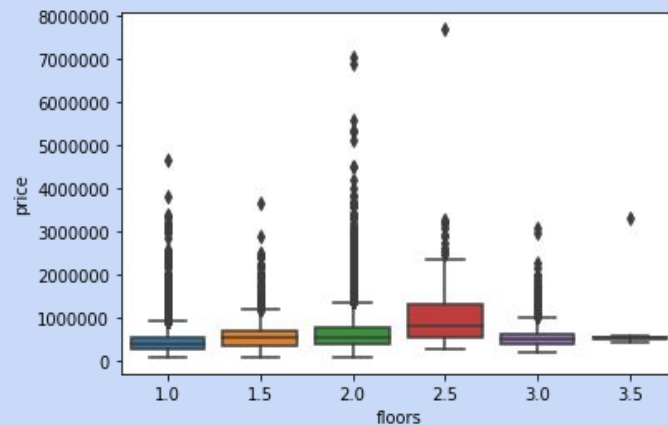
Possible recommendations

- Renovation

- Building an extension

- Adding additional features

Possible recommendations: grade 7 houses

Grade 7 houses: number of floors vs price

Houses of all grades: number of floors vs price

The housing market as a whole

Factors which **best predict the sale price** of houses

- focus: high correlation

- avoidance: predictors which reinforce each other

Correlation between price and possible predictors

Possible predictors

1) Grade

2) Square foot living area

3) Square foot living of 15 nearest neighbours

(Tentative!) results

Square foot living

R^2 = 0.45

Square foot living and square foot living 15

R^2 = 0.47

Technical notes

Regression results for model using sqft living and sqft living 15

OLS Regression Results

Dep. Variable:	price	R-squared:	0.479
Model:	OLS	Adj. R-squared:	0.479
Method:	Least Squares	F-statistic:	9945.
Date:	Wed, 23 Oct 2019	Prob (F-statistic):	0.00
Time:	14:36:20	Log-Likelihood:	-9741.3
No. Observations:	21596	AIC:	1.949e+04
Df Residuals:	21593	BIC:	1.951e+04
Df Model:	2		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	5.5274	0.060	92.700	0.000	5.410	5.644
sqft_living	0.6213	0.009	67.790	0.000	0.603	0.639
sqft_living15	0.3753	0.012	31.614	0.000	0.352	0.399

Omnibus:	149.987	Durbin-Watson:	1.976
Prob(Omnibus):	0.000	Jarque-Bera (JB):	126.886
Skew:	0.128	Prob(JB):	2.80e-28
Kurtosis:	2.726	Cond. No.	249.

Improving our model

1. Research the King's County grading system

2. Scaling