# Real Estate

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# agenda

# Business Understanding

A real estate agency has given us a task to analyze house prices based on various features of the house. They want to know what kind of advice to give to homeowners when they want to buy or sell homes. They also need to know what features of a house a homeowner should focus on so as to increase the selling price of their homes. The aim of this project is to analyze house sales in King County using linear regression in order to offer impactful insights on whether renovations affect house prices and by how much.

# Models

| | | | |
|---|---|---|---|
| Dep. Variable: | price | R-squared: | 0.694 |
| Model: | OLS | Adj. R-squared: | 0.694 |
| Method: | Least Squares | F-statistic: | 1063. |
| Date: | Fri, 30 Sep 2022 | Prob (F-statistic): | 0.00 |
| Time: | 23:26:50 | Log-Likelihood: | -1.9565e+05 |
| No. Observations: | 15008 | AIC: | 3.914e+05 |
| Df Residuals: | 14975 | BIC: | 3.916e+05 |
| Df Model: | 32 | | |
| Covariance Type: | nonrobust | | |

# Model Visual
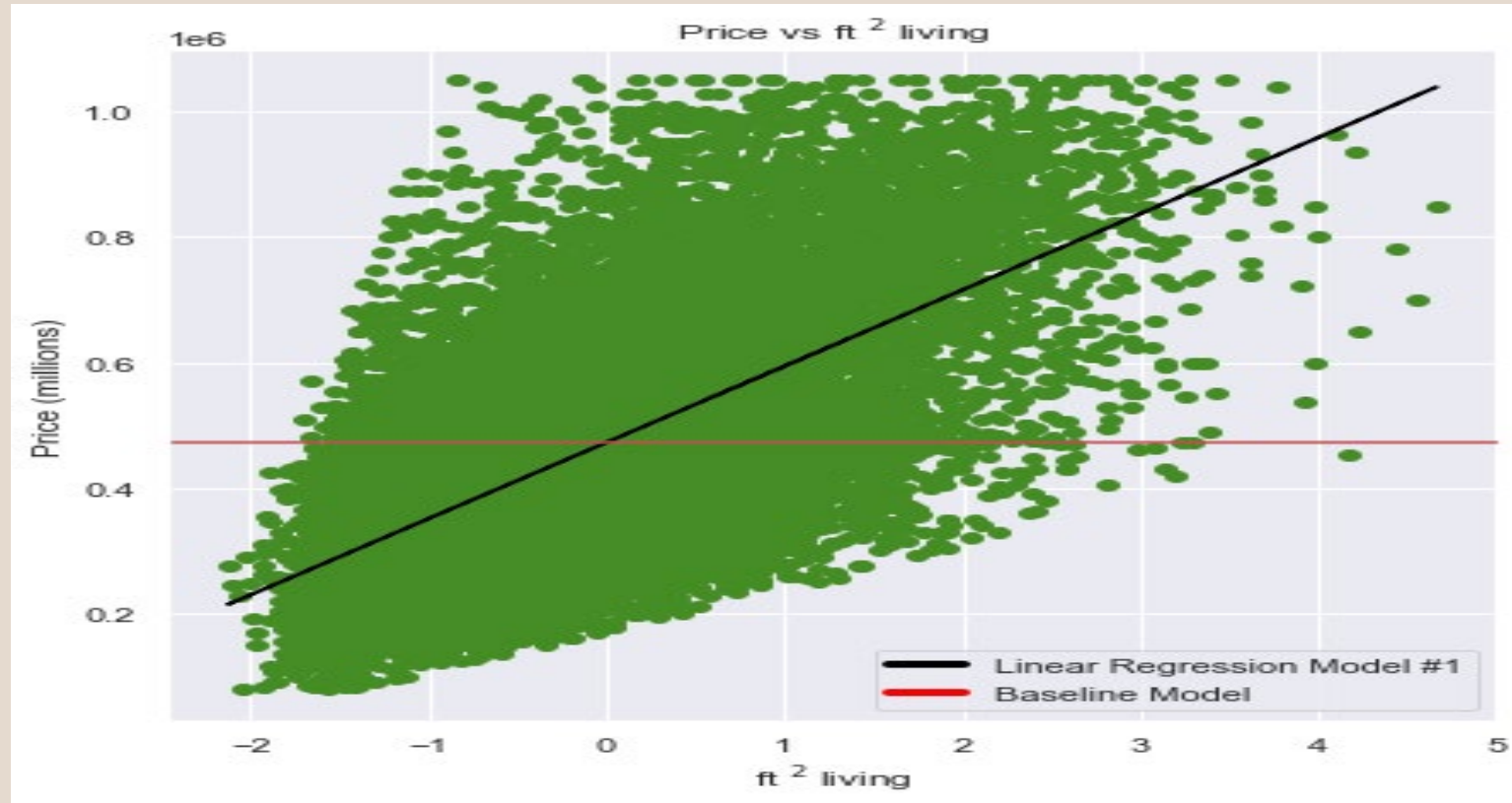
# Model Interpretation

- **Model Interpretation**

- 1.The adjusted R and the R.squared value are close to each other meaning our model reflects relevant features that influence the price.

- 2.The F-statistic is large and the p-value is 0. We can therefore reject the null hypothesis. There is evidence of a linear relation between the variables.

- 3.The p-values for sqft_basement and sqft_above are greater than 0.05. Since we carried out a test for a 95% confidence interval, we fail to reject the null hypothesis for these variables. On the contrary, since the p-values for all the other variables are less than 0.05, we reject the null hypothesis and accept the alternate hypothesis

# summary

1.The higher the sqft_living which stands for the number of square feet for the house, the higher the price of the house.An increase of $51780 is seen
2.When all features are constant, there is an increase of $30910.
3.Grades above 8 record an increase in price. The higher the grade the higher the increase.
4.The better the view the higher the increase in price

thank you