PREDICTING HOUSE PRICES USING LINEAR REGRESSION

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BUSINESS UNDERSTANDING :

Emerald City Realtors need to provide prospective home seller with guidance improve the values of their home through using machine learning to estimate the sale of their properties.

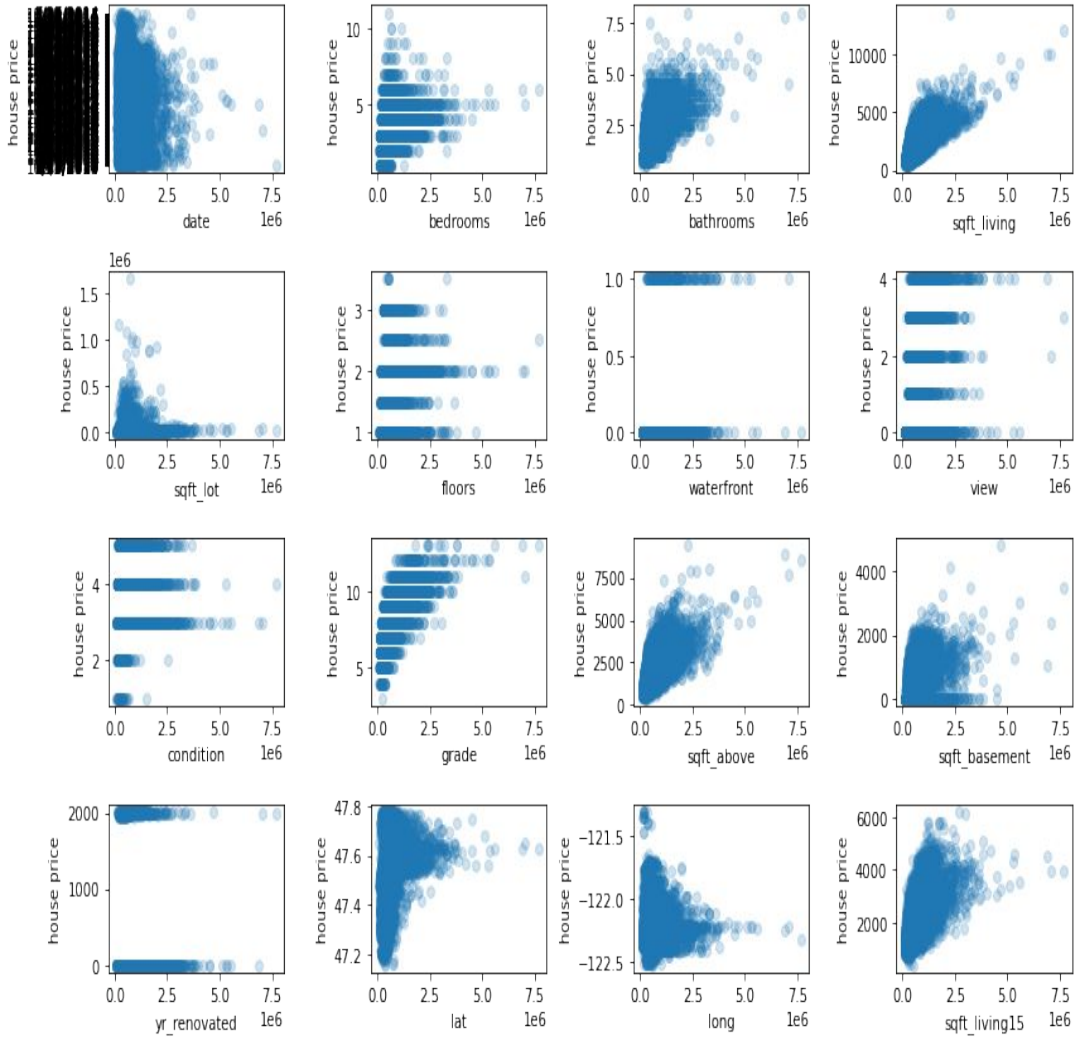
PROBLEM STATEMENT:

- I will use house data set from king house county dataset to build a linear regression model that predict Sale price of properties.

MODELLING

- Linear regression allows us to convey a linear relationship – such that we can observe a one unit increase in X results in a one unit increase in Y.
- In this business case, using regression models allows for us to determine how sale price is impacted by different features and to what degree.
- Building complex models with multiple features allows for us to be able to make more accurate, data-driven predictions.

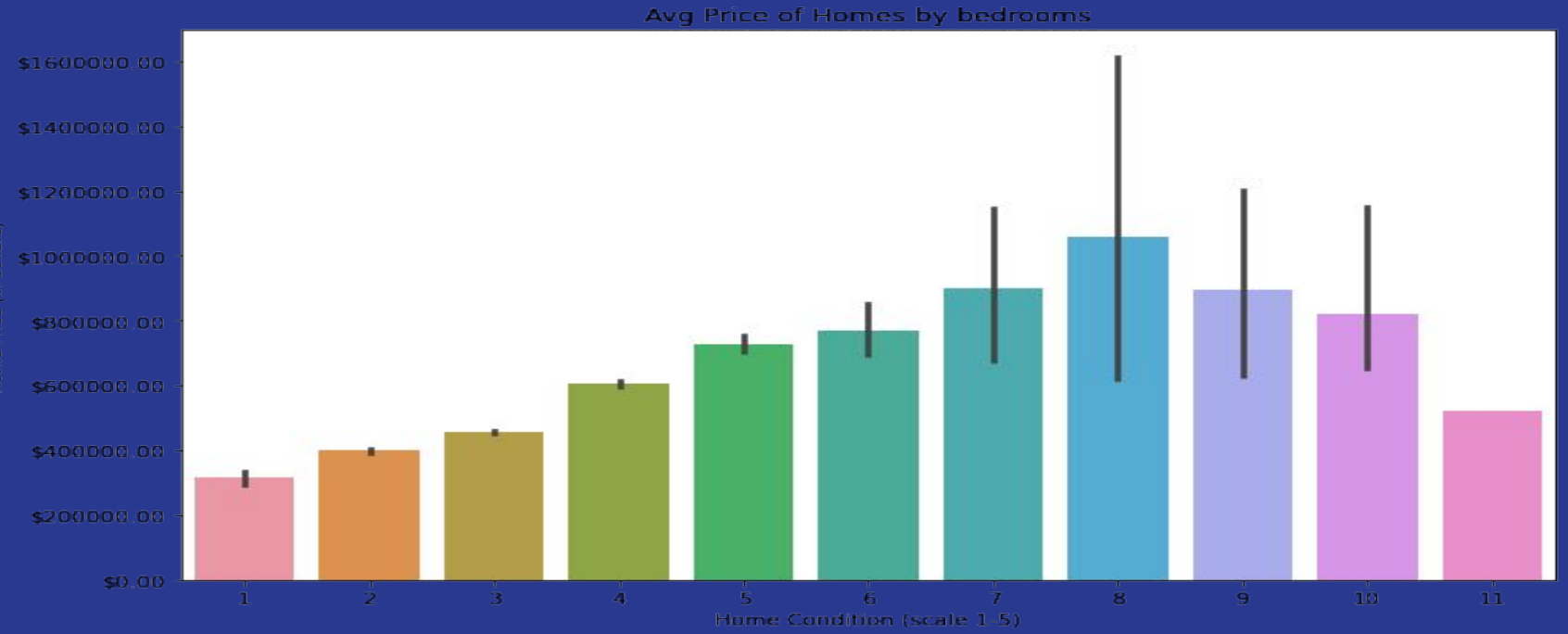
- **CORRELATION BETWEEN NUMERICAL FEATURE AND PRICE**



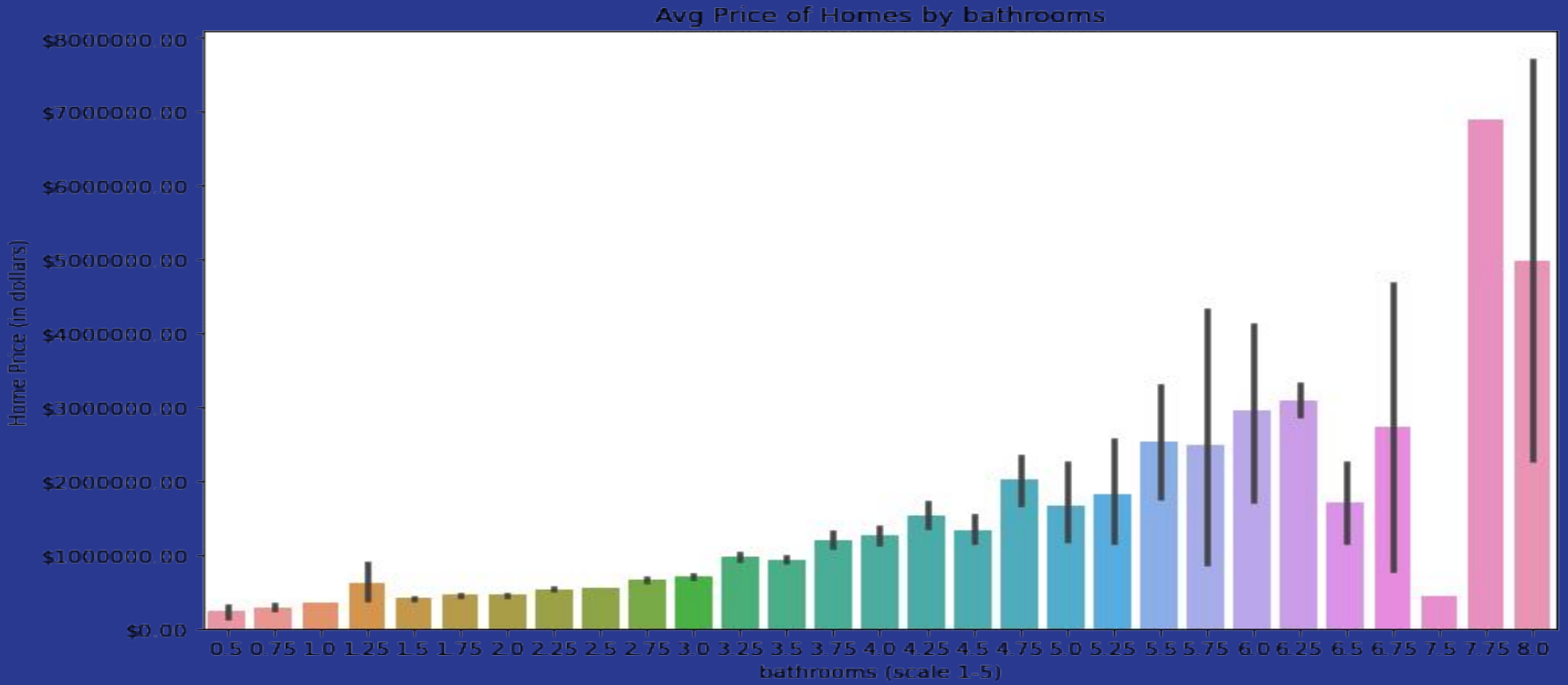
RESULT OF THE MODEL:

- In our final model, all features have a statistically significant linear
- Linear relation with sale price
- While holding all other variables constant:
- The addition of a bathroom increases sale price by $30000
- The addition of one floor level increases sale price by $ 10000

AVERAGE PRICE OF HOME BY BEDROOMS:



AVERAGE PRICES OF HOME BY BATHROOMS:



RECOMMENDATION:

- Adding an additional bathroom to your home is predicted to increase its sale price by $3000.
- Each additional square foot of living space is predicted to add 35.12 dollars to the sale price 500-square foot addition would be predicted to increase the sale price by $17560.
- The addition of one floor level increases sale price by $ 10000

CONCLUSION:

- Our model only explains 53 percent of the variation in sale price,.
- Collect more recent sales data for more accurate representation of the market.

THANK YOU!