

THE NORTH WESTERN HOUSE PREDICTION ANALYSIS

GROUP 3.2 : PARTICIPANTS

Josiah Okumu

Lavender Echessa

Victor Mawira

Mary Wairimu



**Look No more for
Quality advice!!**



BRIEF INTRODUCTION:

- House Price prediction are very stressful work as we have to consider different things while buying a house
- The structure , rooms ,kitchen ,parking space ,the period/time of purchase/ sale of the houses, bedroom numbers,the house grade,the year it was built , floors and the renovations done.
- The Northwestern County housing situation is one that is worth investigating as housing pricing within region is something that cannot be ignored since it affects the majority.



OBJECTIVES:

- To identify the factors that affects the prices of homes in Northwestern county
- To create a model that can help to predict the price of a house in Northwestern county
- The specific objective in this case will be to help homeowners make appropriate decision, on whether renovation affects the property values, hence pricing or whether other factors like bedroom and areas of both house and compounds can as well influence the pricing

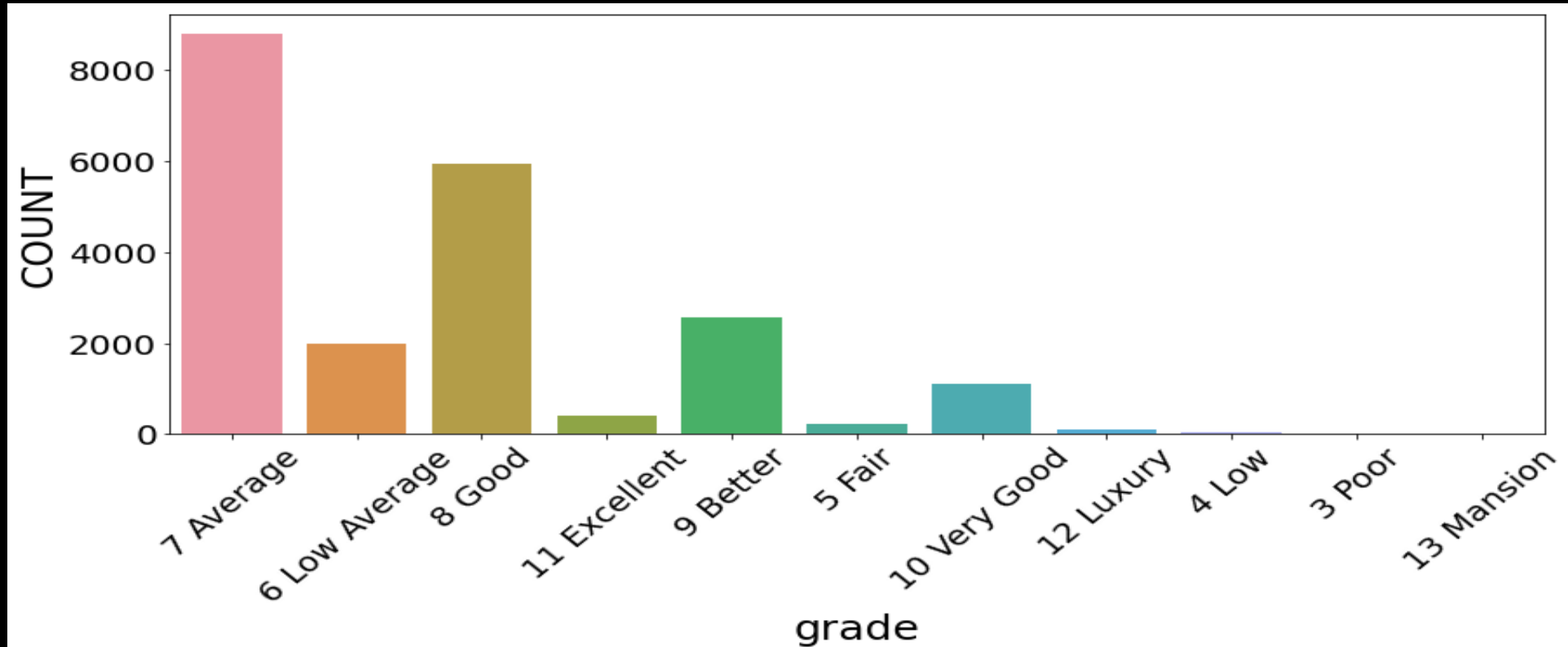
THE PRICE DISTRIBUTION

- The north eastern county has most of the houses ranging at the
- 500,000 and 1000000 and relatively few when increasing the prices



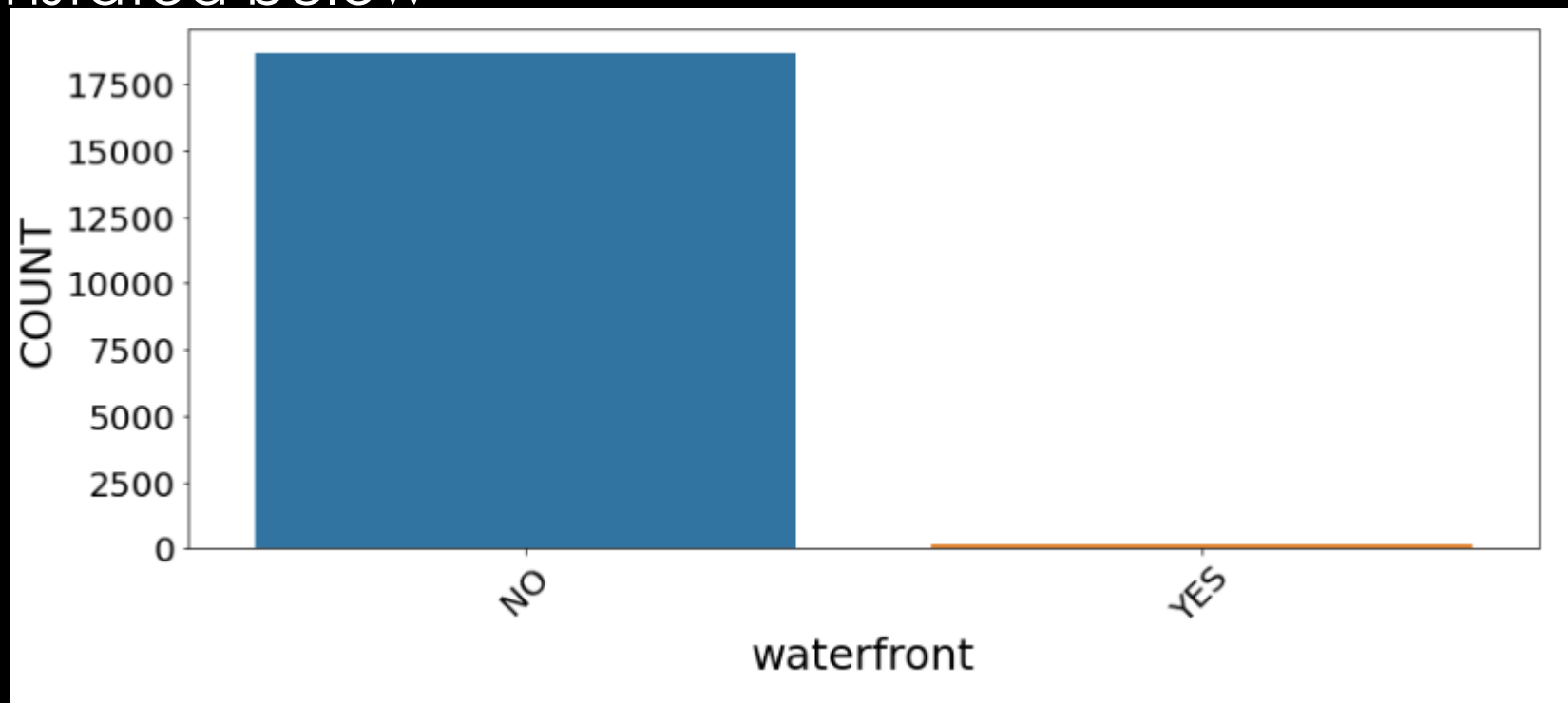
DISTRIBUTION OF GRADES

- the Average grade is seen to be highest followed by Good .Thus showing of that most people not that very pleased



WATERFRONT

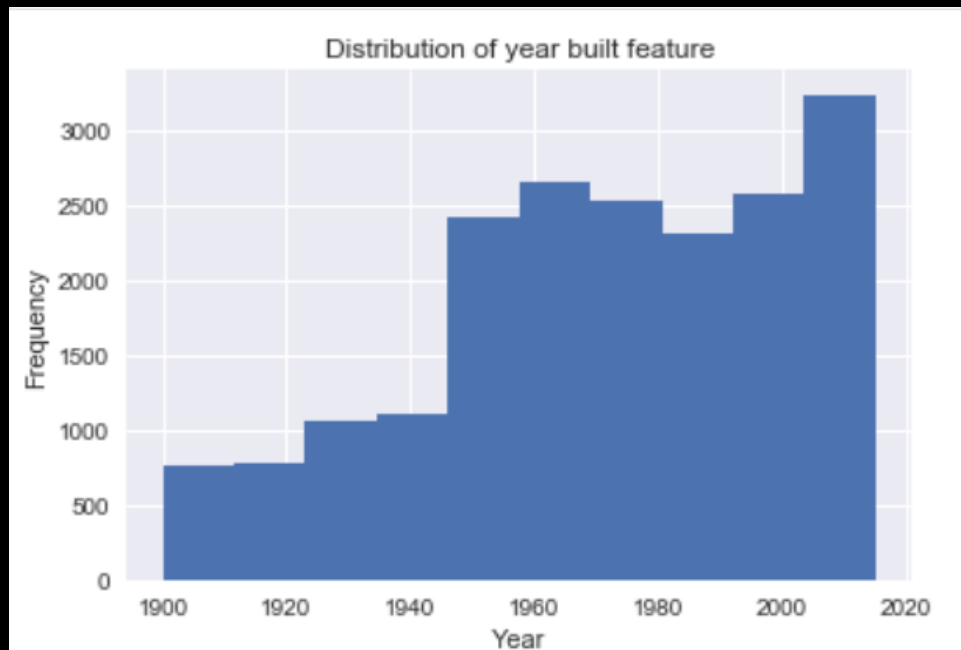
- Most of the people are seen to not have the waterfronts as demonstrated below



YEARS DISTRIBUTION

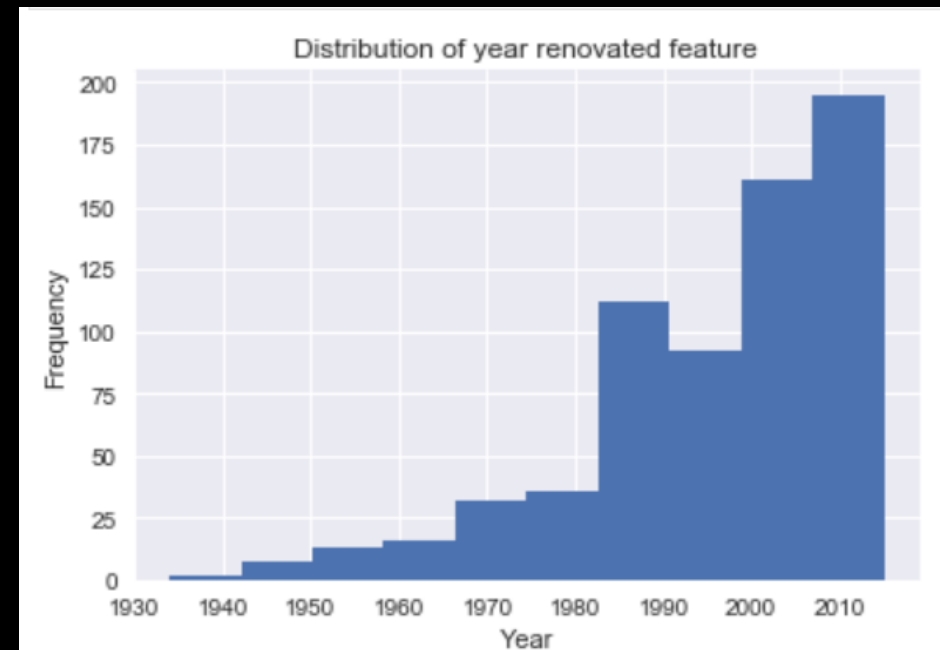
Year built

Most of the buildings are between the 2000 and 2020. And it's continuously rising.



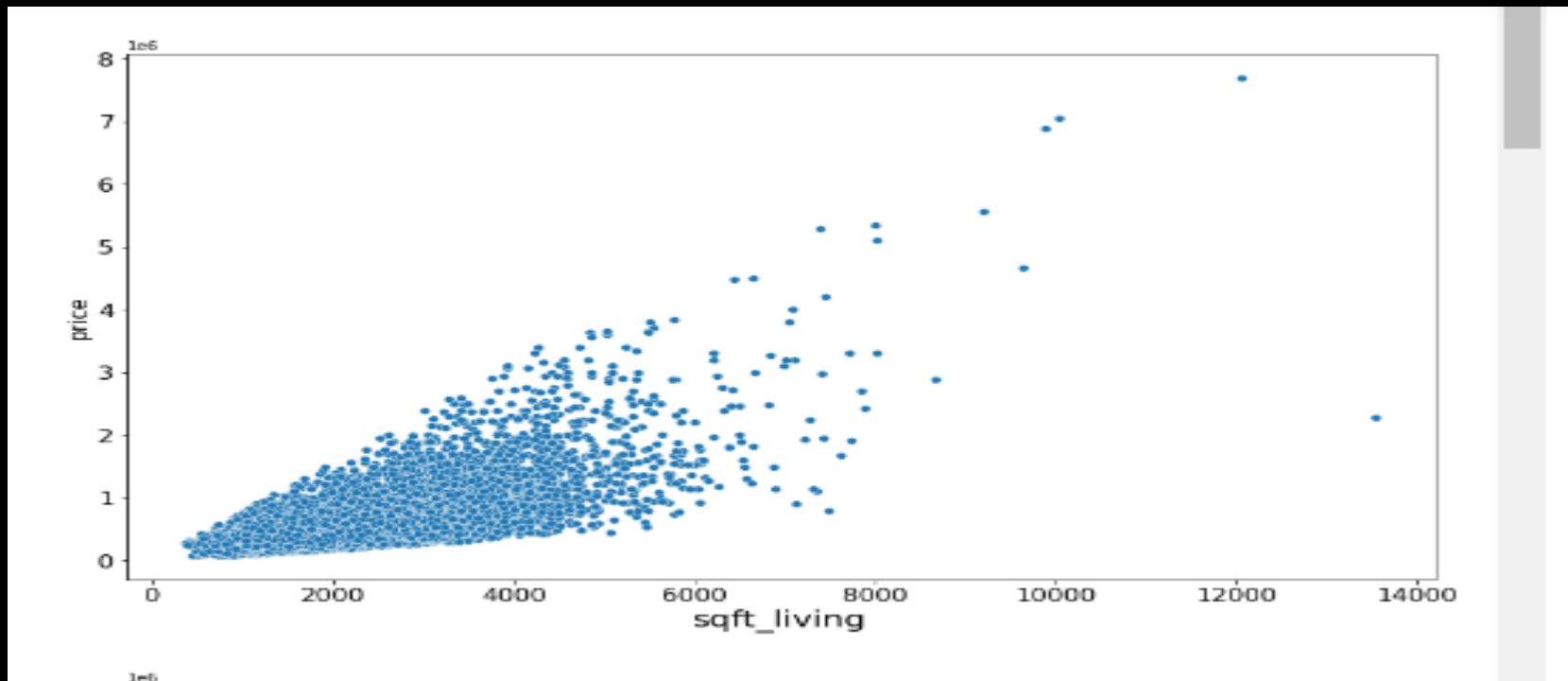
Year of renovations:

Most of the houses are seen to be renovated at around the year 2010



THE SQFT LIVING

- The scatter plot below shows how strongly related the sqft living is related to the price. Thus showing that a change in square feet living strongly affects the price.



MODELLING

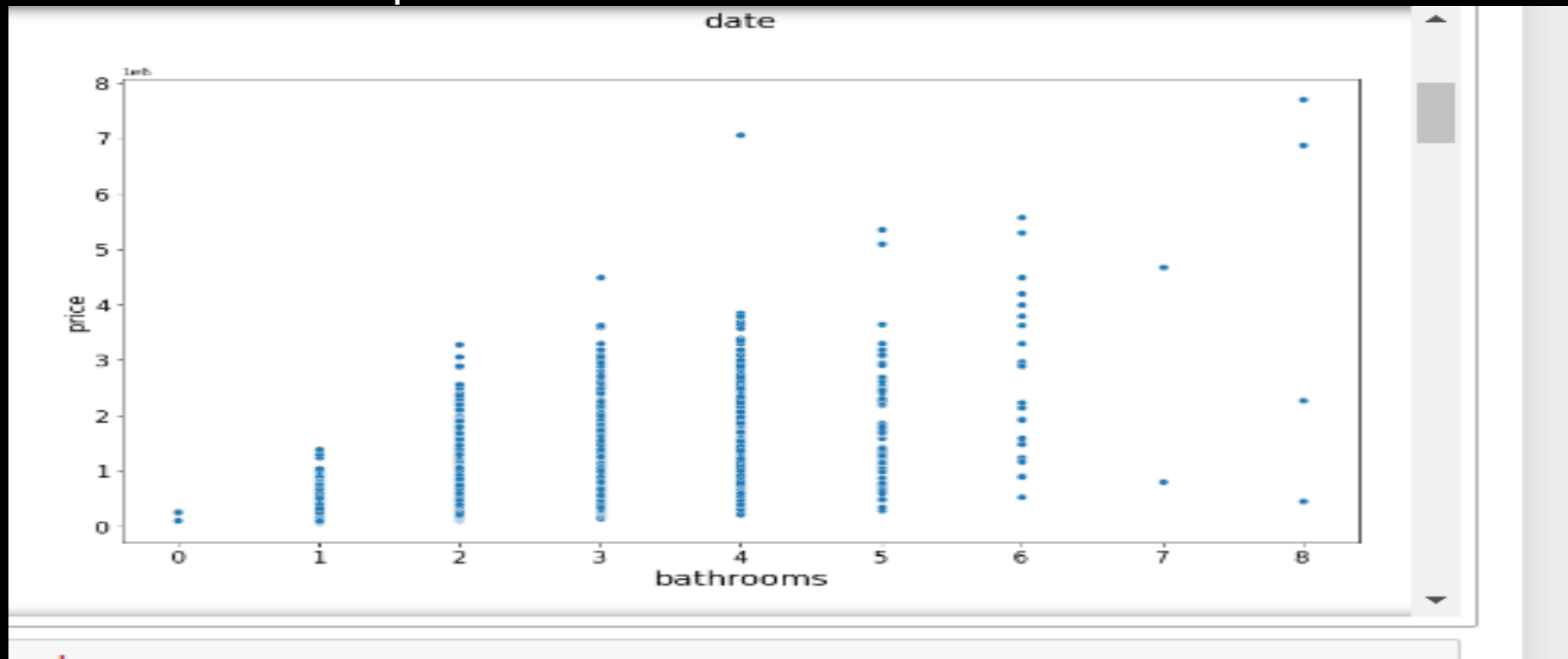
- The regression model we used depicted a 61% level of significance
- It gets to show our features eg bedrooms, bathrooms, sqft_living, floors, waterfronts, view, grade, sqft_above being correlated to the
- Price and causing them to rise

le:	price	R-squared:	0.614
el:	OLS	Adj. R-squared:	0.613
od:	Least Squares	F-statistic:	2098.
te:	Thu, 20 Apr 2023	Prob (F-statistic):	0.00
ne:	12:33:10	Log-Likelihood:	-2.9091e+05
ns:	21143	AIC:	5.819e+05
ls:	21126	BIC:	5.820e+05
el:	16		
pe:	nonrobust		

	coef	std err	t	P> t	[0.025	0.975
	5.114e+06	1.35e+05	37.917	0.000	4.85e+06	5.38e+06
	-1.067e-06	5.54e-07	-1.926	0.054	-2.15e-06	1.9e-06
	-0.8947	15.065	-0.059	0.953	-30.424	28.634
	-5.067e+04	2165.396	-23.399	0.000	-5.49e+04	-4.64e+04
	6.226e+04	3132.142	19.878	0.000	5.61e+04	6.84e+04
	147.6919	2.408	61.340	0.000	142.972	152.411
	-0.0409	0.055	-0.738	0.461	-0.149	0.067
	5.963e+04	3555.710	16.769	0.000	5.27e+04	6.66e+04

BATHROOMS

- The increase in bathroom numbers is seen to cause an increase in the prices as well





CONCLUSION

- We can conclude that different factors affects price of houses differently as shown by visualizations above .There is significant relationship between bedrooms , bathrooms, sqft_living, floors, waterfronts, veiww, grade, sqft_above etc that affects the price of housing in the area.



RECOMENDATIONS

- Homeowners should consider the following when building; bedroom numbers, bathroom numbers, sqft_ living area, sqft lot, quality of the house, sqft basement, vicinity of the house.
- Housing agency should be aware that timing affect the price and should therefore advice homeowners on when to build and sell.
- Consider other algorithms beyond multiple linear regression

THANK YOU

TO THE HOME OWNERS AND AGENCIES HAVE PRODUCTIVE SALES