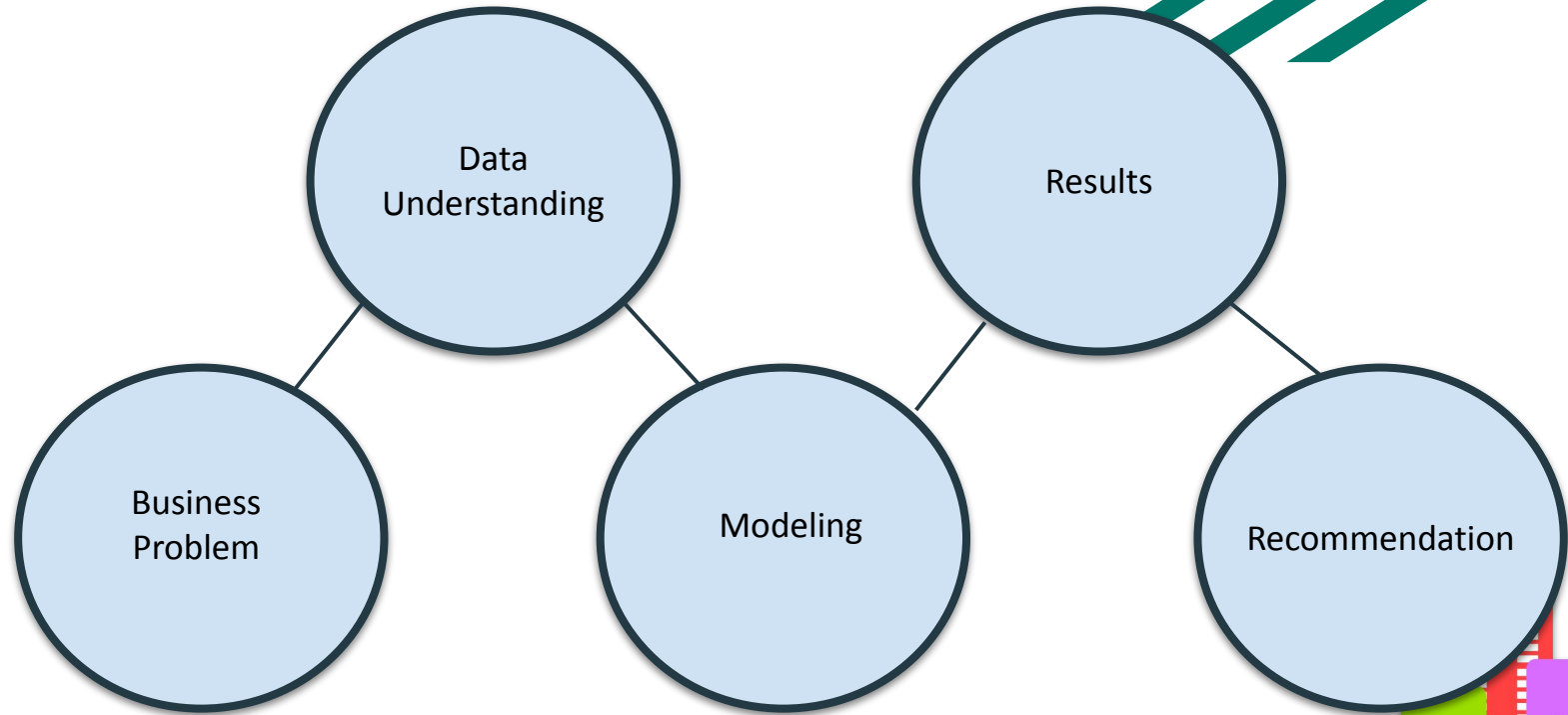




# **King County Real Estate Data Analysis**

# Agenda



# Business Problem

A real estate firm wants to help their clients (Homeowners) sell their homes at a great price.

They want to know what drives the value of a home and how they can advise the homeowner to make the necessary upgrades in order to get better value for their homes.



# Data Understanding



**The data provided was from the King County Sales Dataset.**

The data contained 21597 rows and 20 columns.

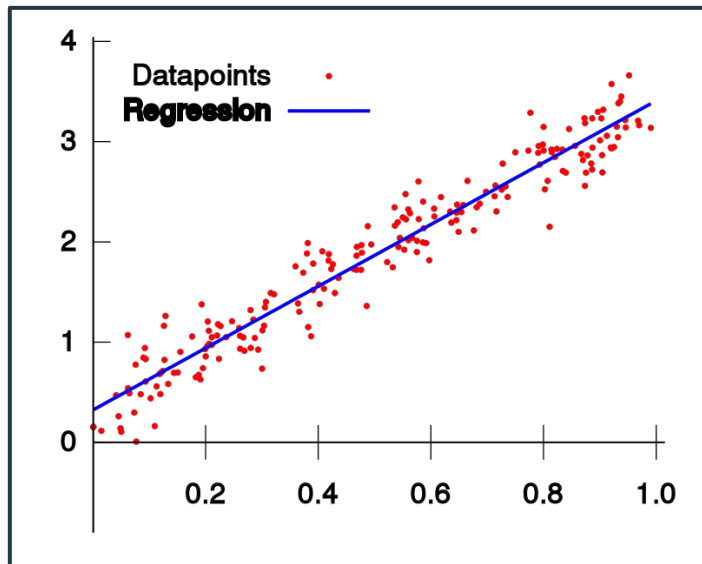
Each row included different information on different aspects of a home.

The target of the data was price and the goal was to see how each aspect of a home impacted the sale price of the home.



# Modeling

## Linear Regression



Dep. Variable:	price	R-squared:	0.588
Model:	OLS	Adj. R-squared:	0.588
Method:	Least Squares	F-statistic:	3400.
Date:	Thu, 28 Apr 2022	Prob (F-statistic):	0.00
Time:	11:50:57	Log-Likelihood:	-7223.5
No. Observations:	21589	AIC:	1.447e+04
Df Residuals:	21579	BIC:	1.455e+04
Df Model:	9		
Covariance Type:	nonrobust		

	coef	std err	t	P> t	[0.025	0.975]
const	11.7059	0.014	859.499	0.000	11.679	11.733
bedrooms	-0.0113	0.003	-3.414	0.001	-0.018	-0.005
bathrooms	-0.0164	0.005	-3.209	0.001	-0.026	-0.006
floors	0.0548	0.006	9.517	0.000	0.044	0.066
waterfront	0.3582	0.031	11.728	0.000	0.298	0.418
view	0.0697	0.003	19.975	0.000	0.063	0.077
grade	0.1768	0.003	50.700	0.000	0.170	0.184
sqft_above	0.0001	6.05e-06	22.433	0.000	0.000	0.000
sqft_basement	0.0003	7.22e-06	38.870	0.000	0.000	0.000
sqft_living15	8.383e-05	5.62e-06	14.921	0.000	7.28e-05	9.48e-05

Omnibus:	14.443	Durbin-Watson:	1.970
Prob(Omnibus):	0.001	Jarque-Bera (JB):	13.826
Skew:	0.042	Prob(JB):	0.000995
Kurtosis:	2.908	Cond. No.	3.80e+04



# Results



## Key Results

Per grade: 17.7% increase



Per bedroom: 1.1% decrease



Per bathroom: 1.6% decrease



# Recommendations

- **Grade is one of the most important factors that can be controlled by the homeowner for price.**

## **For the interior of homes:**

Plumbing, Flooring, Climate control, Electrical

## **For the exterior of homes:**

Exterior walls and Roofing

## **Significance:**

If we were to focus on adding bedrooms and bathrooms instead of upgrades that focus on grade, it could possibly have a negative effect on pricing with a roughly 0.1% and % 0.2% per bed or bath decrease in the value of the home.





## Next Steps

Further analyses could yield additional insights to improve value:

**Better grade evaluation**

**Renovation allocations vs Expected value**

**Landscaping impact**





# Thank You

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