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King Country House Sales Analysis and Modelling ~ Moringa Phase-2 Project

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# KC\_Realestate\_Analysis\_and\_Modelling

Analysis and Modelling of the King Country House Sales Dataset ~ Moringa Phase-2 Project

## 1. Project Overview

### Stakeholders Name: ALPHA TENNENT

In our analysis, we explored the data provided by Alpha Tennent Stakeholders and build a multiple linear regression model with some of the features stipulated in the dataset.

### Problem Statement

We will be reviewing building grade, square-footage of living space, and location-related factors such as proximity to schools, coffee shops, parks, and scientology churches to determine which factors are highly correlated with home sale prices.

## 2. The Data

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The main dataset we are using comes from the King County housing [dataset](#) that contains information on house sales between May 2014 and May 2015 consist of the following variables:

- date: Date of house sale
- price: The price which the house sold for
- bedrooms: How many bedrooms the house has
- bathrooms: How many bathrooms the house has
- sqft\_living: How much square footage the house has
- sqft\_lot: How much square footage the lot has
- floors: How many floors the house has
- waterfront: Whether the house is on the - - - waterfront. Originally contained 'YES' or 'NO', converted to 0 or 1 for comparative purposes
- view: Whether the house has a view and whether it's fair, average, good, or excellent. Converted to numerical (0-4) for comparative purposes
- condition: overall condition of the house: Poor, Fair, Average, Good, Very Good
- grade: Numerical grading for house
- sqft\_above: How much of the houses square footage is above ground
- sqft\_basement: How much of the square footage is in the basement
- yr\_built: Year the house was built
- yr\_renovated: Year the house was renovated, if applicable
- zipcode: House zipcode
- lat: House's latitude coordinate
- long: House's longitude coordinate
- sqft\_living15: Average size of living space for the closest 15 houses
- sqft\_lot15: Average size of lot for the - - closest 15 houses

## 3. EDA

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We did **Univariate**, **Bivariate** and **Multivariate** on the data.

- The categorical columns used were `Condition` and `Grade`
- The numerical columns include: `sqft_living` , `sqft_above` , `yr_built` , `yr_renovated`

## 4. Modelling

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The base model used is a Log-Transformed model that gave an  $R^2$  value of 0.503 We then proceeded to create some Multiple Regression models to try and improve our  $R^2$  score

## 5. Challenges

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Some of the challenges we faced were:

- Skeweness
- Fitting the model

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### Contributors 4



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### Languages

● Jupyter Notebook 100.0%