



Enhancing Renovation and Construction Services in Real Estate



CONSTRUCTION



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OVERVIEW





UrbanCraft Development company in King County specializes in renovating and constructing residential properties, offering services such as renovation ,remodelling and new construction.



They cater to homeowners, real estate investors, and property developers seeking to enhance the value and appeal of their properties.

According to the regression models in our project we take a keen look at the key factors influencing property prices and that will help increase the estimated value of the houses and by how much



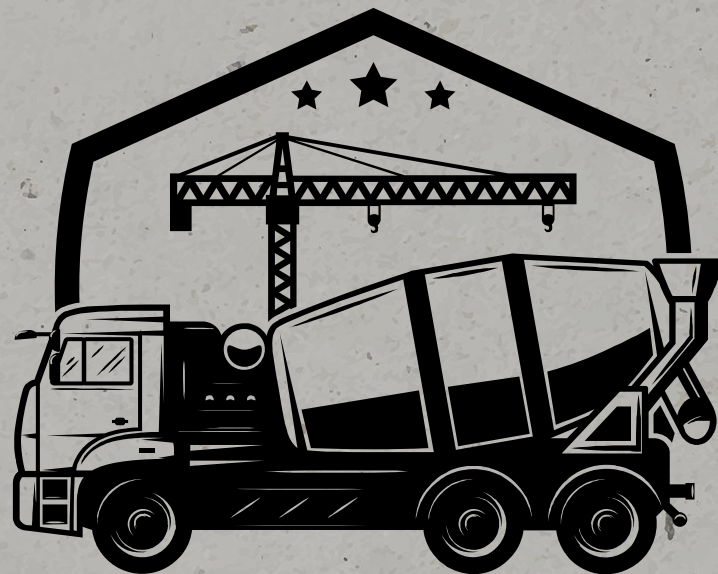
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02



BUSINESS UNDERSTANDING





Stakeholders in this project include:



UrbanCraft Development Company: They are directly involved in renovating and constructing residential properties. They look at key factors influencing property prices to enhance their services and increase the value of the houses they work on.



Homeowners of King County: Homeowners are interested in maximizing the value of their properties. They rely on UrbanCraft to provide renovation and construction services that will increase the value and appeal of their homes.



Real Estate Investors: Investors in real estate are interested in properties that offer good returns on investment.





Business Problem



UrbanCraft Development is a start-up renovation and construction company operating in King County, Washington.

With a focus on enhancing property value and meeting the diverse needs of clients, UrbanCraft aims to leverage market insights, innovation, and sustainable practices to deliver exceptional results in the dynamic real estate landscape of King County.





Business Objectives



Customer Satisfaction: Tailor renovation and construction services based on regression model findings to meet customer preferences, expectations, and budget constraints, ensuring high levels of satisfaction.



Enhance Property Value: Utilize insights from linear regression models to identify key factors influencing property prices, informing renovation and construction projects aimed at maximizing property value.



Brand Differentiation: Utilize regression model findings to establish UrbanCraft as a reputable provider of renovation and construction services known for innovation, quality craftsmanship, and superior customer service.





Business Questions



1. How do bedrooms, bathrooms, square footage, waterfront views, and other property features impact the value of residential properties?
2. How does the condition of a property, including its age, renovation history, and overall quality, affect its market value?
3. What role does the grade or quality rating of a property play in determining its selling price, and how can we leverage this information to enhance our construction and renovation services?



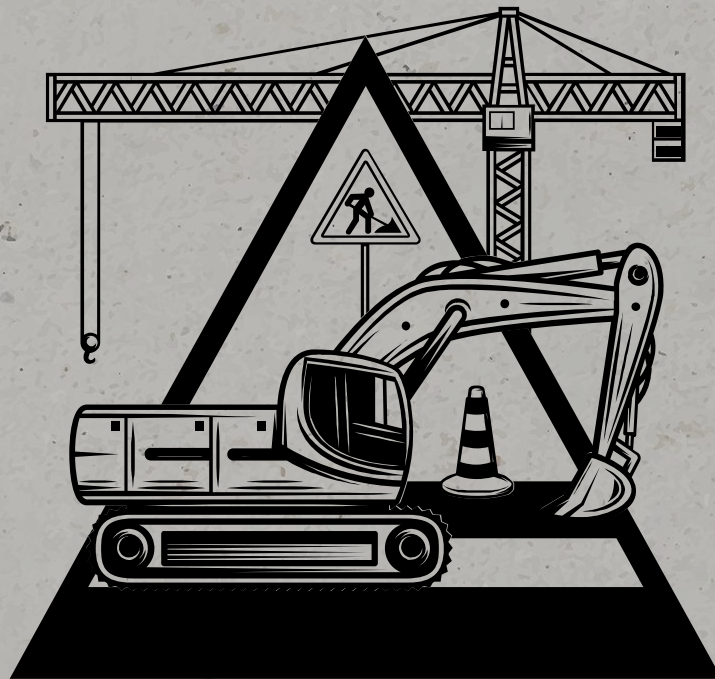
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DATA UNDERSTANDING





King County House CSV Dataset



- ❖ The dataset contains 21,597 entries and 20 columns.
- ❖ Some columns have missing values, such as "waterfront", "view", and "yr_renovated".
- ❖ The data types include integers, floats, and objects (likely representing categorical variables).





Column Names Dataset



- ❖ The provided dataset consists of a single column named "Text" with 26 entries.
- ❖ Each entry is of type object (likely representing strings or text data).
- ❖ There are no missing values in the dataset.
- ❖ It is a small dataset containing textual data, representing descriptions of the columns in the kc house dataset.



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**DATA
ANALYSIS**





- ❖ The data analysis process began with cleaning the dataset, where errors, duplicates, and missing values are addressed to ensure data integrity.
- ❖ Preprocessing follows, involving the transformation of categorical features into numerical format.
- ❖ Subsequently, exploratory data analysis (EDA) is conducted to gain insights into the dataset's characteristics through visualizations and statistical measures.
- ❖ Moving on to modeling, a simple linear regression model is employed to predict the target variable(price) using one predictor (sqft of living room).
- ❖ Finally, a multiple linear regression model is built by incorporating multiple predictors to enhance predictive accuracy, with the significance of each predictor assessed alongside the overall model fit using statistical tests and metrics.



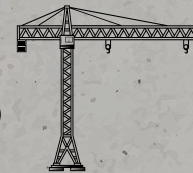
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RECOMMENDATION





Based on the analysis conducted using Model 4, we recommend focusing on specific features to enhance property value through renovation and construction efforts:

- ❑ Prioritize features such as bedrooms, bathrooms, square footage, waterfront status, floors, and year built, as these have a significant positive impact on property prices.
- ❑ Aim for higher property grades and desirable views, as these are associated with increased property values.
- ❑ Consider the potential negative impact of lower-grade categories and certain view types on property prices, and strategize accordingly to mitigate these effects.
- ❑ Ensure that renovation and construction efforts align with the identified influential features to maximize the return on investment and appeal to potential buyers or renters.

By leveraging these insights from Model 4, UrbanCraft Development can tailor its renovation and construction services to meet market demand and achieve optimal outcomes for its clients.



THANK YOU!

