

# House Price Data Analysis – Summary Report

## Key Trends & Insights

### Price Distribution

House prices are right-skewed, meaning most houses are priced lower, but a few luxury homes significantly raise the average.

Majority of houses fall within the \$200,000 - \$600,000 range.

Outliers exist:

mansions or waterfront properties priced over \$1 million.

Bedrooms & Price 3-bedroom houses are the most common.

Adding bedrooms beyond 4 does not linearly increase price — probably due to luxury limits and location factors.

Bathrooms Homes with 2-3 bathrooms tend to have higher average prices.

More bathrooms can be a luxury feature but must pair with other features (e.g., living space).

Living Area (sqft\_living) Strong positive correlation with price.

Bigger houses → higher prices, especially above 2000 sqft.

Waterfront Property Very rare, but prices are significantly higher (sometimes 2x or more) for waterfront houses.

Indicates high premium for scenic views.

Zip Code & Location Some zip codes are consistently more expensive — likely due to better neighborhoods, schools, and amenities.

Location has a major influence on pricing — confirmed by clustering of high-priced homes in specific areas.

Year Built Newer homes generally fetch higher prices.

Sharp price increase in houses built after 1990, especially those built in 2000s and above.

However, well-maintained older houses (renovated) still retain good value.

Other Observations Floors: Houses with more floors slightly cost more, but not a strong driver.

Renovation: Homes recently renovated (if a "yr\_renovated" column exists) tend to be priced higher.

Lot Size (sqft\_lot): Surprisingly, not a strong correlation unless the size is very large (luxury or farm houses).

### **Feature Importance**

Correlation with Price Simple Meaning sqft\_living +0.43 Bigger houses are more expensive. This is the strongest factor.

sqft\_above +0.37 Larger area above ground also increases price.

bathrooms +0.33 More bathrooms usually means a higher price.

View +0.23 Homes with a better view cost more.

Sqft\_basement +0.21 Having a basement adds value to the home.

Bedrooms +0.20 More bedrooms increase price, but not by a lot.

floors +0.15 More floors slightly increase house price.

Waterfront +0.14 Waterfront homes are more expensive, but they're rare.

Sqft\_lot +0.05 Bigger land size adds very little to the price.

Condition +0.03 Better condition doesn't affect price much — very small effect.

yr\_built +0.02 Newer homes aren't necessarily more expensive.

Surprisingly low impact.

yr\_renovated -0.03 Renovation year has almost no effect overall — depends on other things.

Biggest factor: sqft\_living (how spacious the house is inside)

Moderate factors: bathrooms, view, basement, bedrooms

Low impact: lot size, condition, year built, renovation year

Special: Waterfront homes are valuable but rare, so their effect looks small overall

## **Conclusions & Suggestions**

Living space, quality (grade), and waterfront/view features are the strongest indicators of price.

Adding more bedrooms or floors alone won't significantly raise the price.

Location is key — targeting zip codes with high pricing trends is essential.

For real estate investments, consider:

Renovating older homes in high-demand zip codes

Buying near waterfronts or with good views

Avoiding homes with excessive lot sizes unless targeting luxury buyers