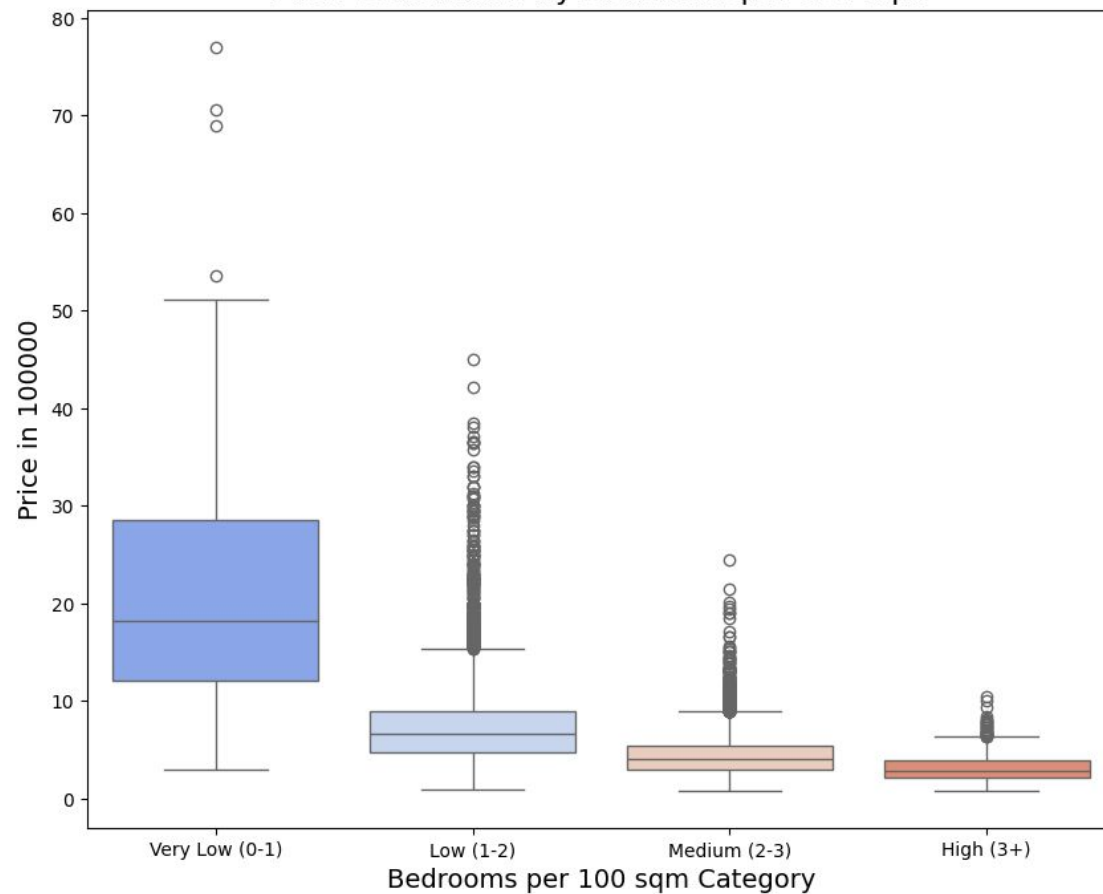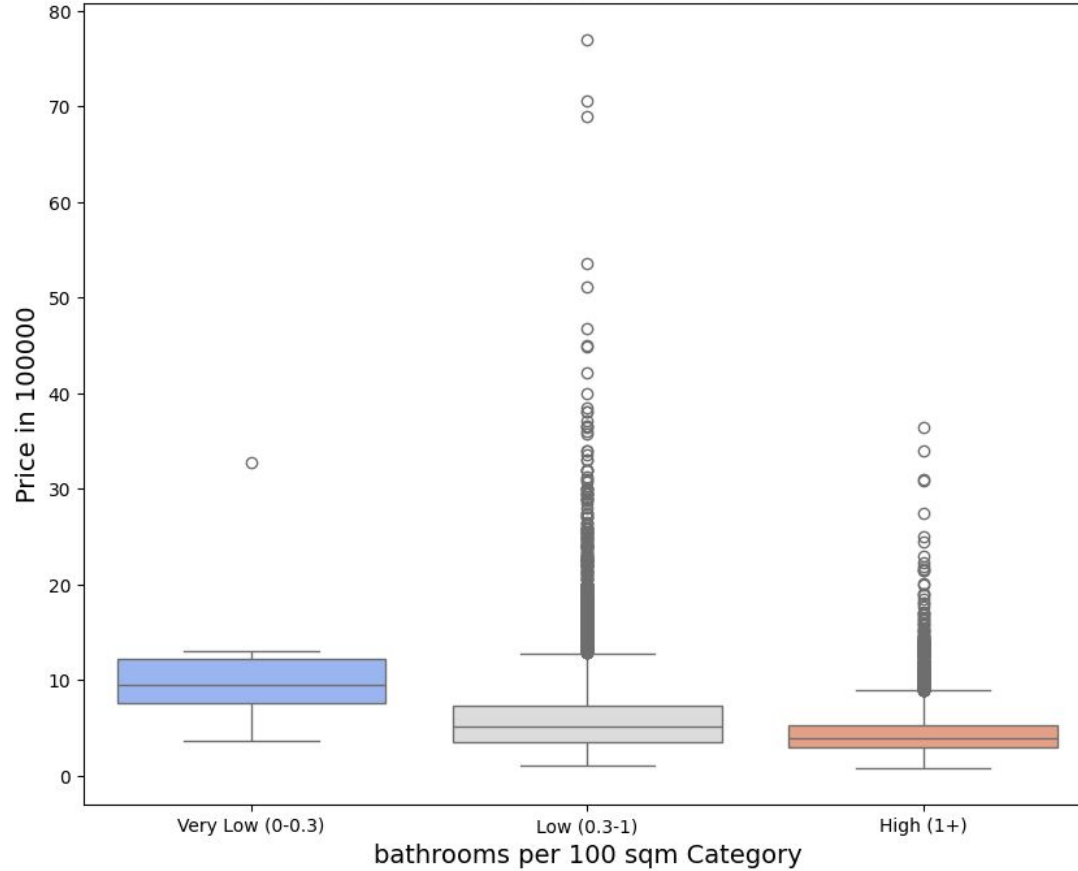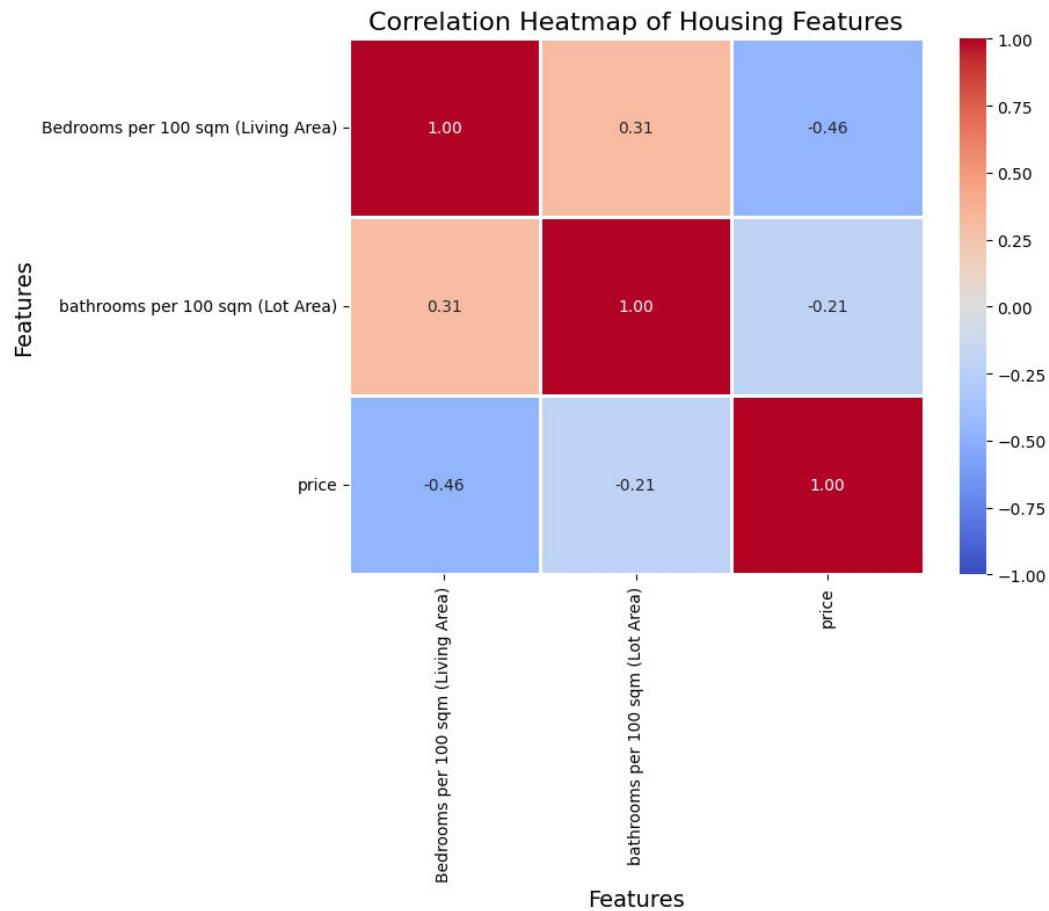The more bedrooms per entity (square meter) of living area, the lower the price of the house

Price Distribution by Bedrooms per 100 sqm

Price Distribution by bathrooms per 100 sqm

Correlation Heatmap of Housing Features

Results:

About 25% in house prices might be associated with the number of bedrooms in the house
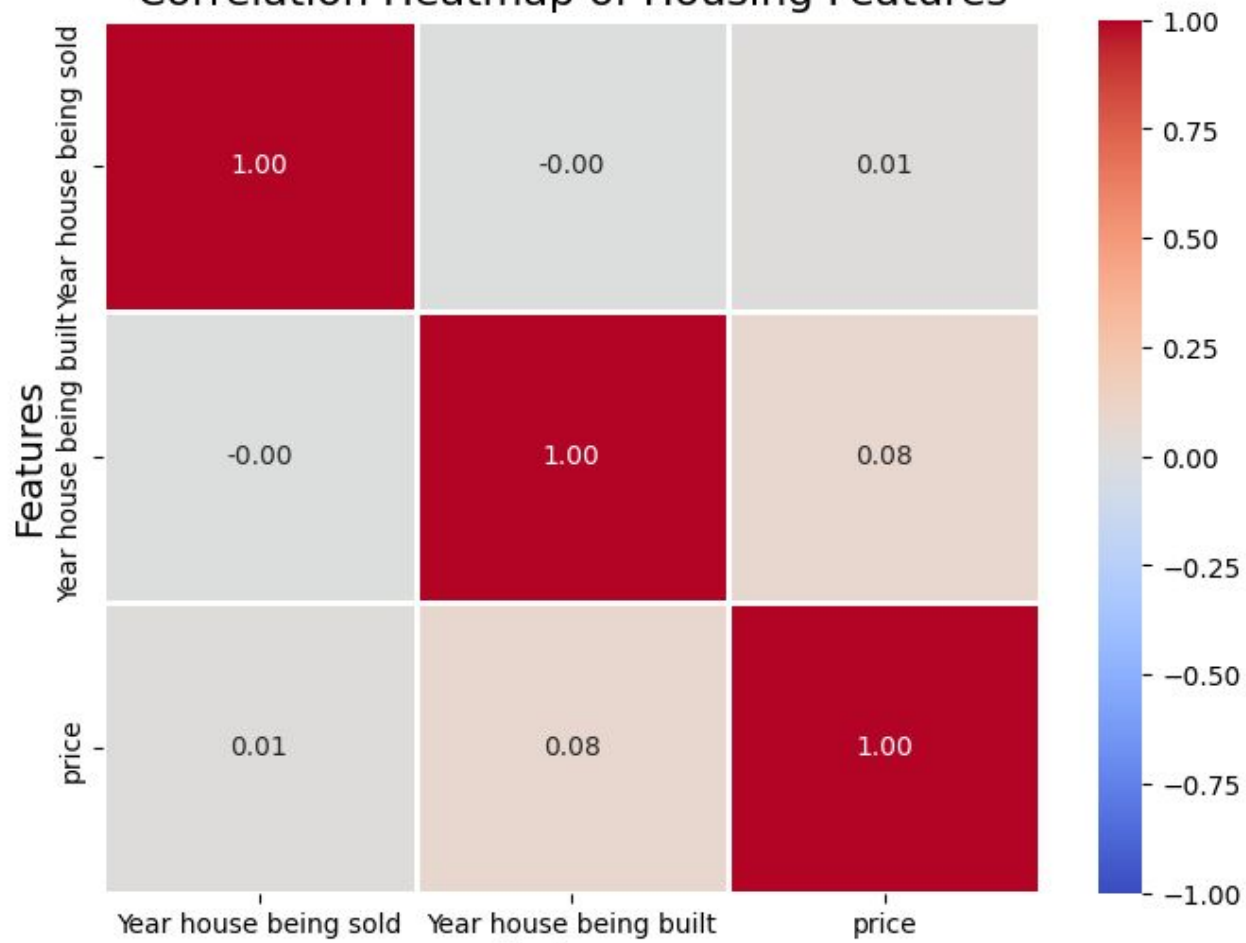
About 5% in house prices might be associated with the number of bathrooms in the house

They are not cumulative since they are correlated by 0.3

However results are unrealistic and might be driven by other factors.

The year the building was constructed has an influence on the selling price.

Correlation Heatmap of Housing Features

Are these results driven by renovation?

Testing only for houses without renovation

Correlation Heatmap of Housing Features
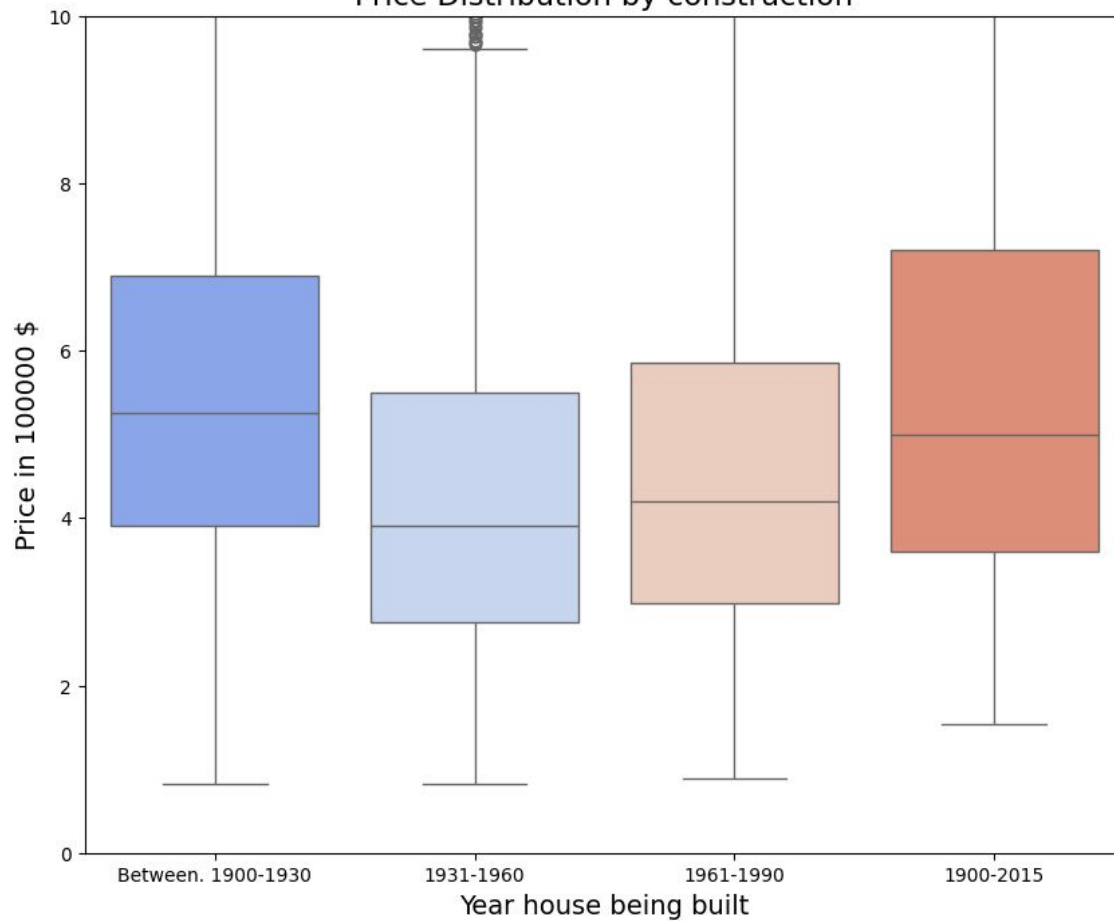
Renovation doesn't matter

It might not be the age of the house, but rather the style in which it was built

We want to examine different decades, each reflecting distinct architectural styles

Focusing on the periods (1900 the oldest and 2015 the youngest hause):

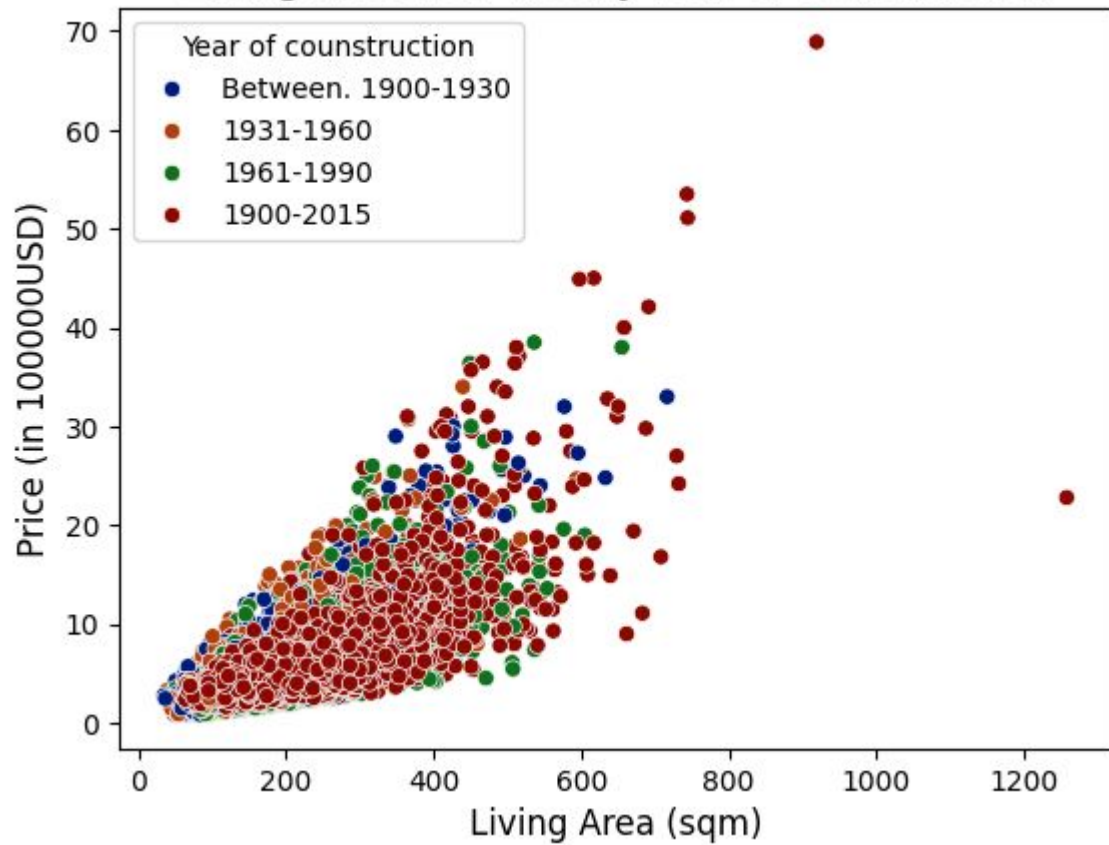1900-1930, 1931-1960, 1961-1990, and 1990-2015.

Price Distribution by construction

The decade of house construction matters

However the living area might bias the results

Living Area vs. Price by Year of Construction

Still not a clear picture

To gain a clearer picture, consider creating a ratio between the age of the house and the living area.

Incorporating multivariate models can enhance the predictive power of your analysis.

Jacob Phillips will need to wait for a response as the course in Data Scientist progresses.

The number of floors should have a negative impact on the price of the house: the more floors relative to the living area, the lower the selling price should be

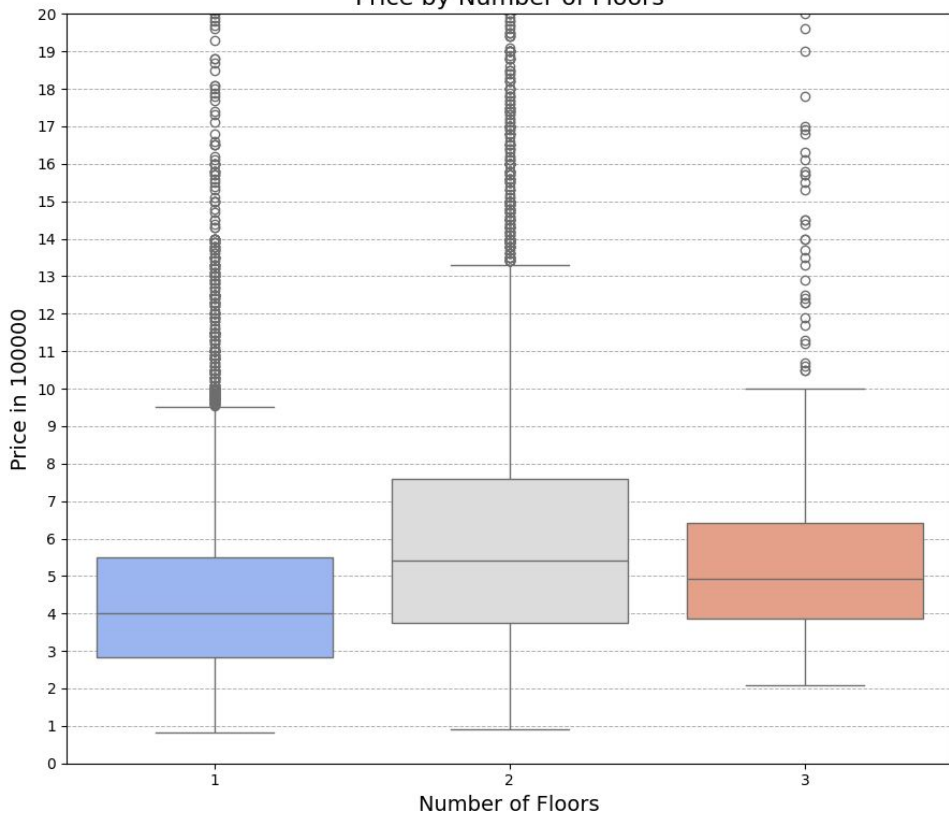Correlation Heatmap of Housing Features
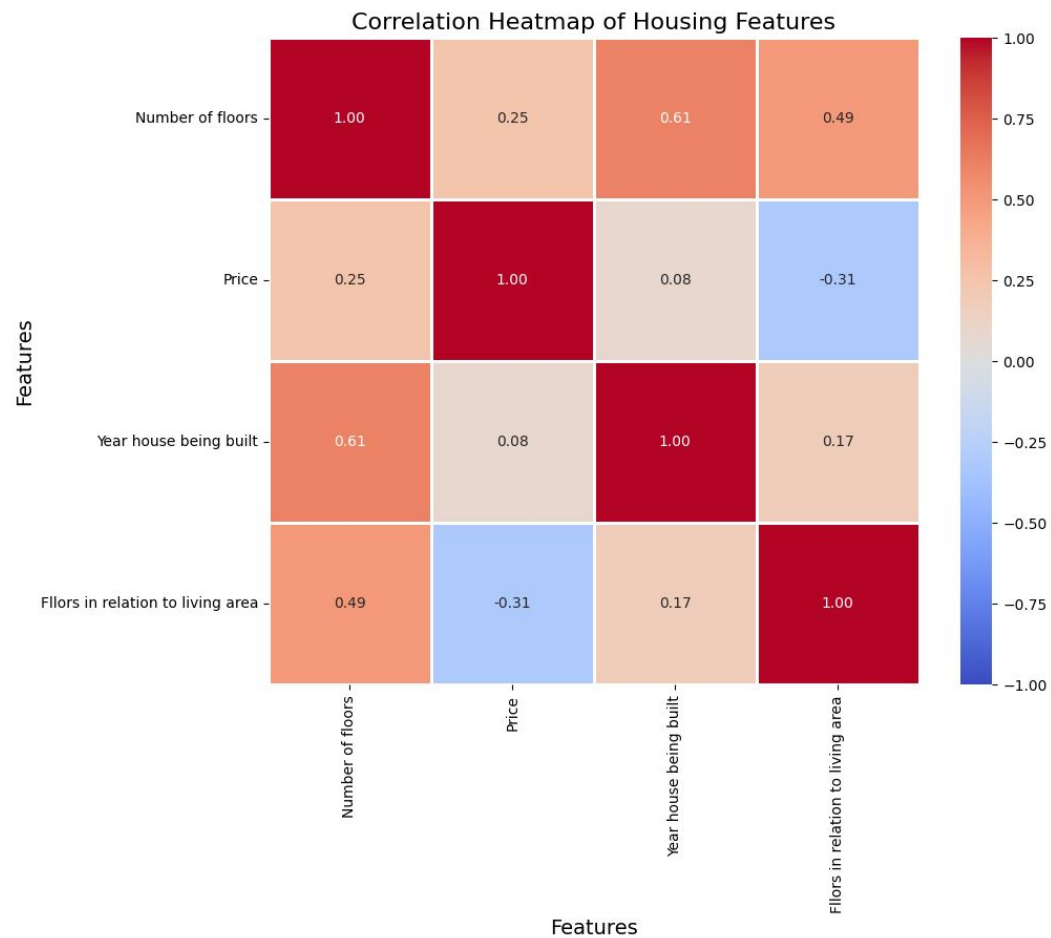
Without adjusting numbers of floors to living area
correlation is positive and amounts to 0.25 (=5%)

Adjusting for the number of floors to living area correlation
becomes negative (-0.31) and amounts to about 6 % of the house
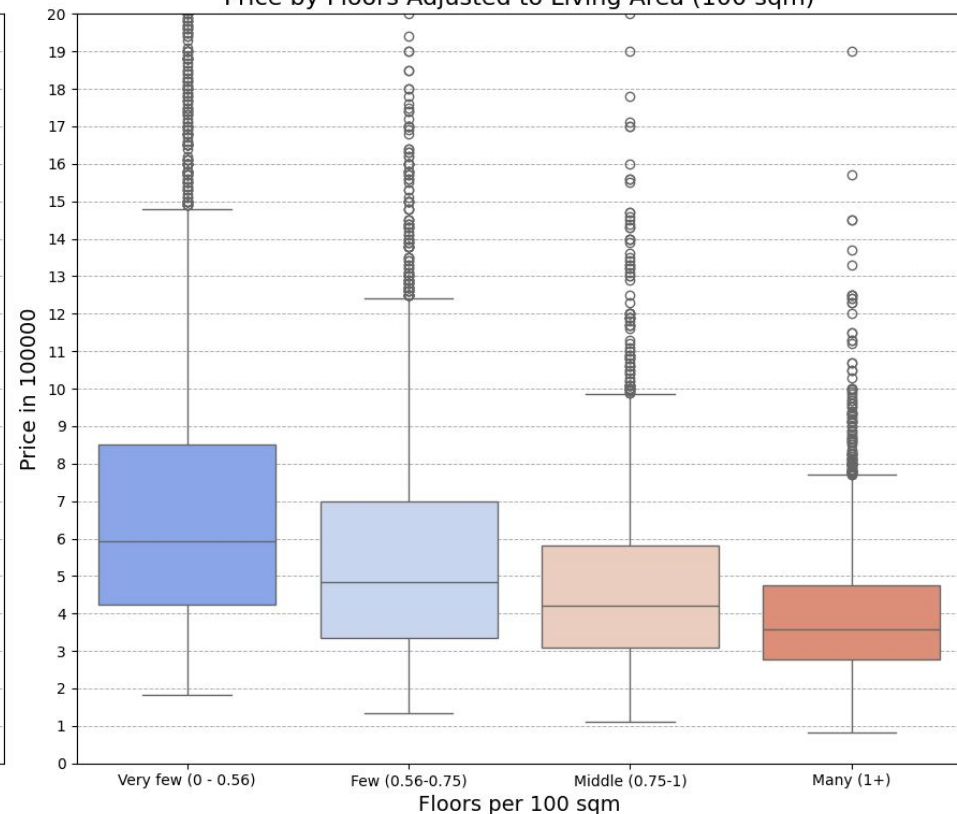
This implies that by the same amount of the living area the number of floors
reduce the house price

How big are differences?

Price by Number of Floors (left) and **Price by Floors Adjusted to Living Area (100 sqm)** (right)

When adjusting for living area, it becomes evident that having fewer floors results in higher prices, while having more floors leads to a reduced selling price.

For example, the difference between "few floors" and "many floors" amounts to 250 thousand dollars for the same living area.

Some recommendations

Jacob Phillips Buyer   Unlimited Budget but good bargain is ok, 4+ bathrooms or smaller house nearby, big lot (tennis court & pool), golf, historic, no waterfront

Recommendations:

Recommendation:

Since Jacob prefers a house with many bathrooms (and bedrooms) he is lucky guy since it reduced price considerably

However these results are less realistic and might be driven by other factors

Recommendations:

Recommendation:

He should search for a house with several floors since it is cheaper than having a house with few floors

Recommendations:

Recommendation:

The house age shows a U-shaped relationship with the price

The client should weigh the architectural features against the price.