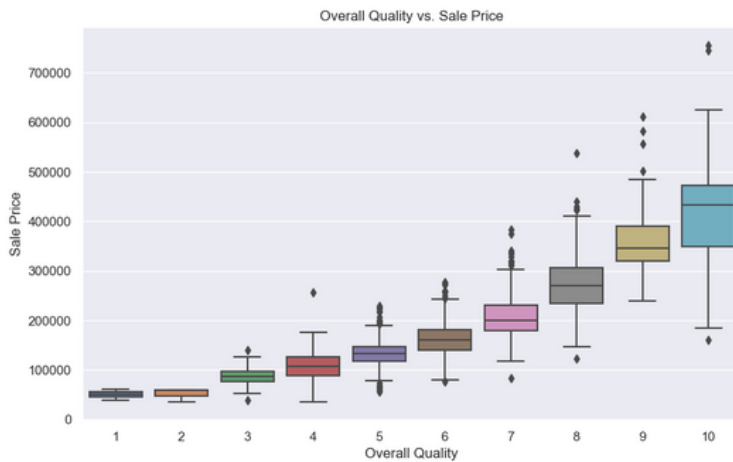




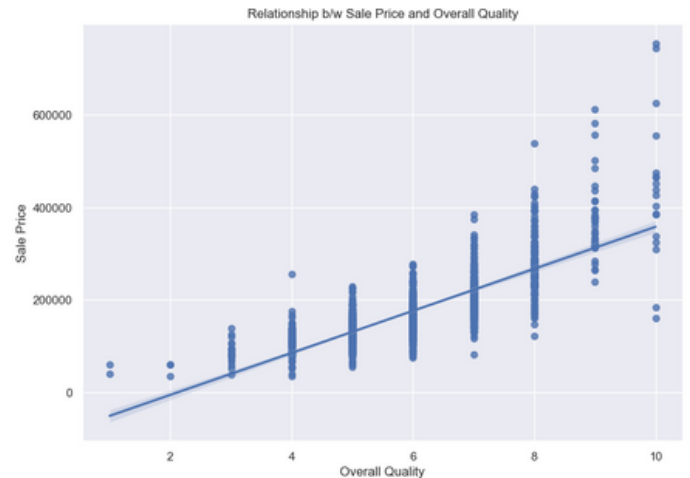
# HOUSE PRICE ANALYSIS SUMMARY

## 1. HOUSES WITH A HIGHER OVERALL QUALITY (OVERALLQUAL) WILL HAVE HIGHER SALE PRICES.

To investigate whether houses with a higher overall quality rating, as indicated by the 'OverallQual' feature, tend to have higher sale prices.



Trend - As OverallQual increases, the median SalePrice also increases



Positive relationship between OverallQual and SalePrice

### ★ CONCLUSION

With positive correlation of 0.79, there appears to be significant positive relationship between the overall quality of houses and their sale prices

## 2. THE SIZE OF THE LIVING AREA (GRLIVAREA) POSITIVELY CORRELATES WITH HIGHER SALE PRICES.

To investigate whether the size of the above ground living area, represented by 'GrLivArea', is positively correlated with higher sale prices.



### ★ OBSERVATIONS

- Positive linear relationship between GrLivArea and SalePrice, where larger living areas tend to be associated with higher sale prices.
- Presence of outliers.

Let's calculate the Pearson correlation coefficient(PCC) which will indicate the strength and direction of the linear relationship between GrLivArea and SalePrice.

## ★ CONCLUSION

WITH POSITIVE CORRELATION OF 0.70, THERE APPEARS TO BE STRONG POSITIVE CORRELATION BETWEEN THE SIZE OF THE LIVING AREA (GRLIVAREA) AND SALE PRICES, INDICATING THAT LARGER LIVING AREAS ARE ASSOCIATED WITH HIGHER SALE PRICES.

### 3. A LARGER BASEMENT AREA (TOTALBSMTSF) WILL LEAD TO HIGHER HOUSE PRICES.



Trend - Larger basement areas tend to have higher SalePrices, suggesting a positive relationship.



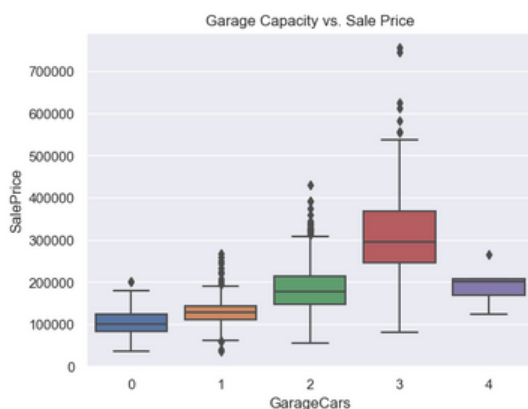
**Positive linear relationship between TotalBsmtSF and SalePrice**

## ★ CONCLUSION

WITH POSITIVE CORRELATION OF 0.61, THERE APPEARS TO BE POSITIVE RELATIONSHIP BETWEEN THE SIZE OF THE BASEMENT AREA (TOTALBSMTSF) AND HOUSE PRICES. LARGER BASEMENT AREAS ARE ASSOCIATED WITH HIGHER SALE PRICES.

### 4. HOUSES WITH A LARGER GARAGE CAPACITY (GARAGECARS) WILL HAVE HIGHER SALE PRICES.

To investigate whether houses with a larger garage capacity, as indicated by 'GarageCars', have higher sale prices.



Houses with more garage capacity generally have higher median SalePrices.

Let's calculate the Pearson correlation coefficient(PCC) which will indicate the strength and direction of the linear relationship between GarageCars and SalePrice.

## ★ CONCLUSION

With positive correlation of 0.64, there is a significant positive association between the capacity of the garage (GarageCars) and sale prices. As garage capacity increases, median sale prices tend to be higher.

## 5. NEIGHBORHOODS HAVE DIFFERENT MEDIAN SALE PRICES

To determine if the choice of neighborhood significantly affects the median sale price, without relying on ANOVA or Pearson Correlation Coefficient.



## ★ OBSERVATIONS

The grouped bar plot provides a visual comparison of the median sale prices among different neighborhoods.

Neighborhoods with higher median sale prices will be more apparent in the plot.

## ★ CONCLUSION

The grouped bar plot helps us observe and compare the median sale prices for various neighborhoods. Based on the visualization, we can conclude that the choice of neighborhood seems to significantly affect the median sale price.