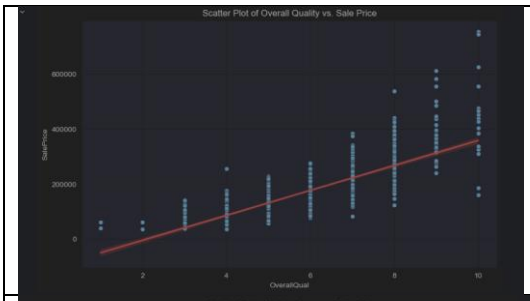
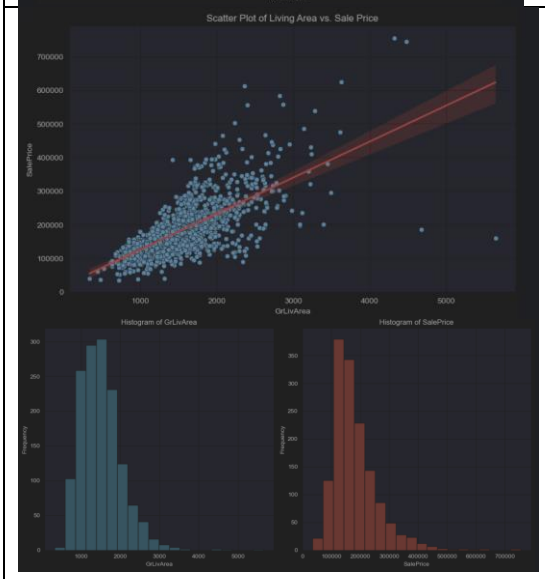
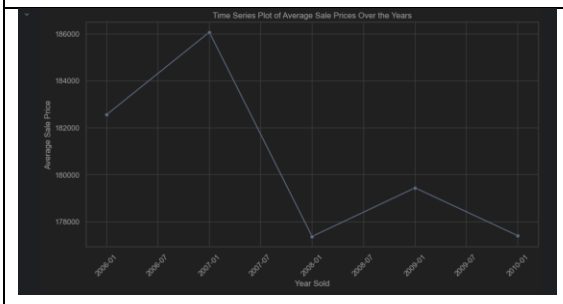
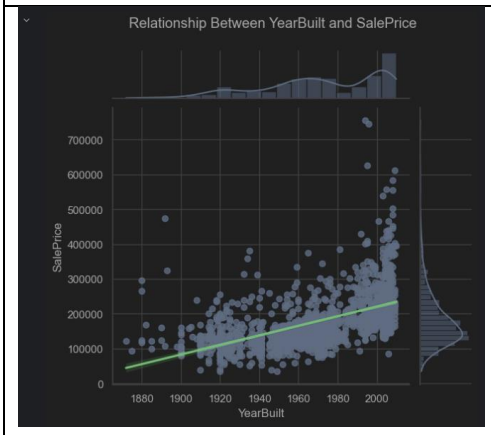
	
	From the histogram of the "GrLivArea" and "SalePrice" variables, you can make the following findings regarding the correlation between the two: Positive Skewness: The histogram of "GrLivArea" is positively skewed, meaning that the majority of the living area sizes are concentrated towards the lower end, but there are some larger living areas as well. This suggests a wide range of living area sizes in the dataset. Distribution Shape: The histogram of "SalePrice" shows that the sale prices are right-skewed. Most of the houses have lower sale prices, but there are a few houses with significantly higher sale prices. This indicates that the dataset contains a range of house prices. Potential Correlation: The histograms alone do not provide a direct measure of the correlation between "GrLivArea" and "SalePrice." However, you can observe that there is a concentration of houses with larger living areas, and some of these houses have higher sale prices. This suggests the possibility of a positive correlation between living area size and sale price.
	Hypothesis 3: Null Hypothesis (H0): There are no significant seasonal trends in house prices over the years ("YrSold"). Alternative Hypothesis (H1): House prices exhibit significant seasonal patterns across different years. Findings: Seasonal Trend: The observed pattern of rising and falling sale prices at specific points in time,

	particularly reaching peak prices around January in certain years and then declining, strongly suggests the presence of a seasonal trend in house prices. This recurring pattern aligns with the concept of seasonality. Seasonal Variation: Notably, there are significant fluctuations in sale prices between peak and minimum points, and these fluctuations occur at approximately one-year intervals. This consistent pattern of variation further supports the idea of seasonal fluctuations in house prices over different years. Conclusion: Based on the findings from the time series analysis of average sale prices over the years ("YrSold"), we conclude the following: We reject the Null Hypothesis (H0), accepting the alternative Hypothesis (H1). The presence of a clear and consistent cyclical pattern in sale prices, characterized by rising to peak prices around January in certain years and then declining, serves as compelling evidence supporting the alternative hypothesis. This pattern strongly indicates that house prices exhibit significant seasonal patterns across different years.
	Findings: Overall Trend: The regression line in the joint plot slopes upwards (from left to right), which suggests that newer houses tend to have higher sale prices. This visual trend supports the idea that the age of the house is associated with its sale price. Scattered Data Points: While there is an overall trend, it's important to note that there are some scattered data points on the graph that exhibit high variability even among houses of the same age. This variability indicates that other factors may also influence sale prices. However, most data points are concentrated around the trend line, highlighting the general relationship.

	Correlation Coefficient: The correlation coefficient of 0.52 quantifies the strength and direction of the relationship between the age of the house and its sale price. A positive correlation coefficient indicates a moderate positive relationship. Conclusion: Based on the findings and analysis: We reject the Null Hypothesis (H0) in favor of the Alternative Hypothesis (H1). The upward-sloping regression line and the correlation coefficient of 0.52 provide substantial evidence that the age of a house is significantly associated with its sale price. Specifically, newer houses tend to have higher sale prices. It's important to acknowledge that while the age of the house is a meaningful factor, other variables and factors also contribute to the variability in sale prices, as evidenced by the scattered data points. However, the dominant trend supports the association between house age and sale price.