Assignment-6

**Interview Questions**

1. **Normalization & Standardization**:
   * **Normalization** scales the data to a fixed range (usually [0, 1]). This is useful when the features have different units or scales.
   * **Standardization** transforms data to have a mean of 0 and a standard deviation of 1. It’s beneficial when the data follows a Gaussian distribution and is often preferred in regression models to ensure that all features contribute equally.
2. **Addressing Multicollinearity**:
   * **Variance Inflation Factor (VIF)**: Calculate VIF for each predictor and remove those with high values (typically > 10).
   * **Remove Highly Correlated Features**: Analyze the correlation matrix and drop one of the correlated features.
   * **Regularization Techniques**: Lasso and Ridge regression can help manage multicollinearity by adding a penalty term to the loss function.

**Conclusion**

* Document all findings, assumptions, and insights from your analysis.
* Discuss implications of model performance and any potential biases in the dataset.
* Ensure code is well-commented to explain each step and its purpose.