Performance Analysis Report:

Accuracy:

Training Set: 0.20199501246882792

Test Set: 0.15177065767284992

The model achieved an accuracy of approximately 20.2% on the training set and 15.2% on the test set. These accuracy values indicate that the model's predictions were not highly accurate, performing below the desired level.

Precision:

Training Set: 1.0

Test Set: 1.0

The precision values of 1.0 for both the training and test sets suggest that the model made no false positive predictions. However, it's important to note that precision alone may not provide a complete picture of model performance.

Recall:

Training Set: 1.0

Test Set: 0.9736842105263158

The recall value of 1.0 for the training set indicates that the model correctly identified all positive instances. However, the recall value of approximately 97.4% on the test set suggests that the model missed some positive instances, leading to a relatively high false negative rate.

F1 Score:

Training Set: 1.0

Test Set: 0.9866666666666666

The F1 score is a combined metric that considers both precision and recall. The F1 score of 1.0 on the training set indicates a perfect balance between precision and recall, whereas the F1 score of approximately 98.7% on the test set suggests a high overall performance.

Conclusions:

Accuracy: The model's accuracy on both the training and test sets was relatively low, indicating that the model's predictions did not align well with the actual labels. This may indicate that the model needs further improvement to enhance its predictive performance.

Precision and Recall: The model achieved perfect precision on both the training and test sets, suggesting that it made no false positive predictions. However, the lower recall value on the test set indicates that the model missed some positive instances, leading to false negatives.

F1 Score: The high F1 score on the test set suggests that the model achieved a good balance between precision and recall, although the relatively low recall value indicates room for improvement.