Summary:

The K-Nearest Neighbors (KNN) model, with the best parameters of `{'n_neighbors': 5}`, achieved a high ROC-AUC score of 0.9656, indicating strong performance in distinguishing between classes. It demonstrated balanced precision, recall, and F1-scores for both the positive and negative classes, with an overall accuracy of 92%. The Decision Tree model, using a maximum depth of 10, performed similarly, with a ROC-AUC score of 0.9610, slightly lower than KNN, and also achieved 92% accuracy, with good precision and recall. Logistic Regression, with the best parameters of `{'C': 10, 'max_iter': 1000, 'solver': 'saga'}`, showed a lower ROC-AUC score of 0.9505, and its precision, recall, and F1-scores were slightly lower than those of KNN and Decision Tree, yielding an accuracy of 89%. Overall, KNN performed the best in terms of ROC-AUC and overall balance, followed closely by Decision Tree, while Logistic Regression, though still effective, lagged slightly behind the other models in distinguishing between classes.