DecisionTreeClassifier

1. DecisionTreeClassifier(random_state=30)

   Results:
   Accuracy: 0.916083916083916
   Confusion Matrix:
   [[47 5]
   [7 84]]
   Precision: 0.9438202247191011
   Recall: 0.9230769230769231
   F-Score: 0.9333333333333333

2. DecisionTreeClassifier(criterion = "entropy", random_state=30)

   Results:
   Accuracy: 0.9370629370629371
   Confusion Matrix:
   [[48 4]
   [5 86]]
   Precision: 0.9555555555555556
   Recall: 0.945054945054945
   F-Score: 0.9502762430939227

3. DecisionTreeClassifier(max_depth= 4, min_samples_split=3, random_state=30)

   Results:
   Accuracy: 0.9300699300699301
   Confusion Matrix:
   [[46 6]
   [4 87]]
   Precision: 0.9354838709677419
   Recall: 0.9560439560439561
   F-Score: 0.9456521739130435

4. DecisionTreeClassifier(criterion = "entropy", max_depth= 4, min_samples_split=3, random_state=30)

   Results:
   Accuracy: 0.9300699300699301
   Confusion Matrix:
   [[47 5]
   [5 86]]
   Precision: 0.945054945054945
   Recall: 0.945054945054945
   F-Score: 0.945054945054945

5. DecisionTreeClassifier(min_samples_split=6, random_state=30)

   Results:
   Accuracy: 0.916083916083916
   Confusion Matrix:
   [[47 5]
   [7 84]]
   Precision: 0.9438202247191011
   Recall: 0.9230769230769231
   F-Score: 0.9333333333333333

6. DecisionTreeClassifier(splitter="random", random_state=30)

   Results :
   Accuracy: 0.958041958041958
   Confusion Matrix:
   [[49 3]
   [3 88]]
   Precision: 0.967032967032967
   Recall: 0.967032967032967
   F-Score: 0.967032967032967

RandomForestClassifier

1. RandomForestClassifier(random_state=30)

   Results :
   Accuracy: 0.958041958041958
   Confusion Matrix:
   [[47 5]
   [1 90]]
   Precision: 0.9473684210526315
   Recall: 0.989010989010989
   F-Score: 0.967741935483871

2. RandomForestClassifier(criterion="entropy", min_impurity_decrease=7.6 ,random_state=30)

   Results :
   Accuracy: 0.6363636363636364
   Confusion Matrix:
   [[0 52]
   [0 91]]
   Precision: 0.6363636363636364
   Recall: 1.0
   F-Score: 0.7777777777777778

3. RandomForestClassifier(n_estimators= 150, random_state=30)

   Results :
   Accuracy: 0.951048951048951
   Confusion Matrix:
   [[46 6]
   [1 90]]
   Precision: 0.9375
   Recall: 0.989010989010989
   F-Score: 0.9625668449197861

4. RandomForestClassifier(n_estimators= 15, criterion="entropy", random_state=30)

   Results:

   Accuracy: 0.9370629370629371
   Confusion Matrix:
   [[46 6]
   [3 88]]
   Precision: 0.9361702127659575
   Recall: 0.967032967032967
   F-Score: 0.9513513513513514

5. RandomForestClassifier(n_estimators= 25, criterion="entropy", max_depth=4, random_state=30)

   Results:
   Accuracy: 0.9440559440559441
   Confusion Matrix:
   [[45 7]
   [1 90]]
   Precision: 0.9278350515463918
   Recall: 0.989010989010989
   F-Score: 0.9574468085106383

6. RandomForestClassifier(criterion="entropy", max_depth=4, random_state=30)

   Results:
   Accuracy: 0.951048951048951
   Confusion Matrix:
   [[46 6]
   [1 90]]
   Precision: 0.9375
   Recall: 0.989010989010989
   F-Score: 0.9625668449197861

7. RandomForestClassifier(max_depth=4, random_state=30)

   Results:
   Accuracy: 0.951048951048951
   Confusion Matrix:
   [[46 6]
   [1 90]]
   Precision: 0.9375
   Recall: 0.989010989010989
   F-Score: 0.9625668449197861

AdaBoostClassifier

1. AdaBoostClassifier(random_state=30)

   Results:
   Accuracy: 0.958041958041958
   Confusion Matrix:
   [[48 4]
   [2 89]]
   Precision: 0.956989247311828
   Recall: 0.978021978021978
   F-Score: 0.967391304347826

2. AdaBoostClassifier(n_estimators=30, random_state=30)

   Results:
   Accuracy: 0.965034965034965
   Confusion Matrix:
   [[49 3]
   [2 89]]
   Precision: 0.967391304347826
   Recall: 0.978021978021978
   F-Score: 0.9726775956284153

3. AdaBoostClassifier(n_estimators=70, random_state=30)

   Results:
   Accuracy: 0.965034965034965
   Confusion Matrix:
   [[49 3]
   [2 89]]
   Precision: 0.967391304347826
   Recall: 0.978021978021978
   F-Score: 0.9726775956284153

4. AdaBoostClassifier(learning_rate= 0.9, random_state=30)

   Results:
   Accuracy: 0.965034965034965
   Confusion Matrix:
   [[48 4]
   [1 90]]
   Precision: 0.9574468085106383
   Recall: 0.989010989010989
   F-Score: 0.972972972972973

5. AdaBoostClassifier(n_estimators=70,learning_rate= 0.9, random_state=30)

   Results:
   Accuracy: 0.951048951048951
   Confusion Matrix:
   [[48 4]
   [3 88]]
   Precision: 0.9565217391304348
   Recall: 0.967032967032967
   F-Score: 0.9617486338797814