

Decision Tree :

1. DecisionTreeClassifier(max_depth=4, min_samples_split=3, random_state=20)

Results-

Accuracy- 0.92397661

Precision- 0.95238095

Recall- 0.92592593

F-Score- 0.93896714

Confusion Matrix- [[58,5],
[8,100]]

2. DecisionTreeClassifier(max_depth=9, min_samples_split=3, min_samples_leaf=2
random_state=36)

Results-

Accuracy- 0.94152047

Precision- 0.96226415

Recall- 0.94444444

F-Score- 0.95327103

Confusion Matrix- [[59,4],
[6,102]]

3. DecisionTreeClassifier(max_depth=3, min_samples_split=8, min_samples_leaf=7
random_state=41)

Results-

Accuracy- 0.95906433

Precision- 0.97196262

Recall- 0.96296296

F-Score- 0.96744186

Confusion Matrix- [[60,3],
[4,104]]

4. DecisionTreeClassifier(max_depth=36)

Results-

Accuracy- 0.92982546

Precision- 0.96153846

Recall- 0.92592593

F-Score- 0.943339623

Confusion Matrix- [[59,4],
[8,100]]

5. DecisionTreeClassifier(max_depth=33, min_samples_leaf= 8)

Results-

Accuracy- 0.94152047

Precision- 0.93750000

Recall- 0.97222222

F-Score- 0.95454545

Confusion Matrix- [[56,7],
[3,105]]

Random Forest Tree-

1. RandomForestClassifier (n_estimators= 60, max_depth=10, min_samples_leaf=4, random_state= 12)

Results-

Accuracy- 0.97076023

Precision- 0.97247706

Recall- 0.98148148

F-Score- 0.97695853

Confusion Matrix- [[60,3],
[2,106]]

2. RandomForestClassifier(n_estimators= 60, max_depth=10, random_state= 12)

Results-

Accuracy- 0.97076023

Precision- 0.97247706

Recall- 0.98148148

F-Score- 0.97695853

Confusion Matrix- [[60,3],
[2,106]]

3. RandomForestClassifier(n_estimators= 37, max_depth=80, random_state= 67)

Results-

Accuracy- 0.97076023

Precision- 0.96396396

Recall- 0.99074074

F-Score- 0.97716895

Confusion Matrix- [[59,4],
[1,107]]

4. RandomForestClassifier(max_depth=12, random_state= 34)

Results-

Accuracy- 0.97076023

Precision- 0.97247706

Recall- 0.98148148

F-Score- 0.97695853

Confusion Matrix- [[60,3],
[2,106]]

5. RandomForestClassifier(n_estimators= 43, max_depth=23, min_samples_split=7, min_samples_leaf=6, random_state=2)

Results-

Accuracy- 0.95906433

Precision- 0.96330275

Recall- 0.97222222

F-Score- 0.96774194

Confusion Matrix- [[59,4],
[3,105]

AdaBoost-

1. AdaBoostClassifier(n_estimators=67, learning_rate=0.9)

Results-

Accuracy- 0.96491228

Precision- 0.99038462

Recall- 0.95370370

F-Score- 0.97169811

Confusion Matrix- [62,1]
[5,103]

2. AdaBoostClassifier(n_estimators=52, learning_rate=0.5, random_state=65)

Results-

Accuracy- 0.95906433

Precision- 0.97196262

Recall- 0.96296296

F-Score- 0.96744186

Confusion Matrix- [60,3]
[4,105]

3. AdaBoostClassifier(n_estimators=52, learning_rate=0.5, random_state=65)

Results-

Accuracy- 0.95906433

Precision- 0.97196262

Recall- 0.96296296

F-Score- 0.96744186

Confusion Matrix- [60,3]
[4,105]

4. AdaBoostClassifier(learning_rate=0.8, random_state=43)

Results-

Accuracy- 0.95321637

Precision- 0.98076923

Recall- 0.94444444

F-Score- 0.96226415

Confusion Matrix- [61,2]
[6,102]

5. AdaBoostClassifier(random_state=87)

Results-

Accuracy- 0.97660819

Precision- 0.98148148

Recall- 0.98148148

F-Score- 0.98148148

Confusion Matrix- [61,2]
[2,106]