Report Problem 1 A

Testing: 75.0% , Training: 25.0%

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.056%

Size Of tree : 27

Error: 1.944%

Testing: 75.0% , Training: 25.0%

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.154%

Size Of tree : 29

Error: 1.846%

Testing: 75.0% , Training: 25.0%

Train Data Accuracy: 1.0 , Test Data Accuracy: 97.959%

Size Of tree : 21

Error: 2.041%

Testing: 75.0% , Training: 25.0%

Train Data Accuracy: 1.0 , Test Data Accuracy: 97.765%

Size Of tree : 29

Error: 2.235%

Testing: 75.0% , Training: 25.0%

Train Data Accuracy: 1.0 , Test Data Accuracy: 97.085%

Size Of tree : 29

Error: 2.915%

==> Testing: 75.0% , Training: 25.0%

==> Max Data Accuracy: 98.154% , Min Data Accuracy: 97.085% , Avg Data Accuracy: 97.8038%

==> Max Size Of tree: 29 , Min Size Of tree: 21 , Avg Size Of tree: 27.0

Report Problem 1 B

Iteration : 1

Testing: 70.0% , Training: 30.0%

Mean: 0.4505723204994797

Size Of tree : 31

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.231%

Error: 1.769%

Iteration : 2

Testing: 70.0% , Training: 30.0%

Mean: 0.44849115504682624

Size Of tree : 25

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.335%

Error: 1.665%

Iteration : 3

Testing: 70.0% , Training: 30.0%

Mean: 0.44016649323621226

Size Of tree : 25

Train Data Accuracy: 1.0 , Test Data Accuracy: 96.67%

Error: 3.33%

Iteration : 4

Testing: 70.0% , Training: 30.0%

Mean: 0.45265348595213317

Size Of tree : 23

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.335%

Error: 1.665%

Iteration : 5

Testing: 70.0% , Training: 30.0%

Mean: 0.44432882414151925

Size Of tree : 21

Train Data Accuracy: 1.0 , Test Data Accuracy: 97.503%

Error: 2.497%

==> Testing: 70.0% , Training: 30.0%

==> Max Data Accuracy: 98.335% , Min Data Accuracy: 96.67% , Avg Data Accuracy: 97.81479999999999%

==> Max Size Of tree: 31 , Min Size Of tree: 21 , Avg Size Of tree: 25.0

==> Average Mean: 0.4472

Iteration : 1

Testing: 60.0% , Training: 40.0%

Mean: 0.42839805825242716

Size Of tree : 29

Train Data Accuracy: 1.0 , Test Data Accuracy: 96.723%

Error: 3.277%

Iteration : 2

Testing: 60.0% , Training: 40.0%

Mean: 0.4587378640776699

Size Of tree : 25

Train Data Accuracy: 1.0 , Test Data Accuracy: 99.029%

Error: 0.971%

Iteration : 3

Testing: 60.0% , Training: 40.0%

Mean: 0.45145631067961167

Size Of tree : 17

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.058%

Error: 1.942%

Iteration : 4

Testing: 60.0% , Training: 40.0%

Mean: 0.4538834951456311

Size Of tree : 29

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.422%

Error: 1.578%

Iteration : 5

Testing: 60.0% , Training: 40.0%

Mean: 0.4429611650485437

Size Of tree : 31

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.058%

Error: 1.942%

==> Testing: 60.0% , Training: 40.0%

==> Max Data Accuracy: 99.029% , Min Data Accuracy: 96.723% , Avg Data Accuracy: 98.05799999999999%

==> Max Size Of tree: 31 , Min Size Of tree: 17 , Avg Size Of tree: 26.2

==> Average Mean: 0.4471

Iteration : 1

Testing: 50.0% , Training: 50.0%

Mean: 0.4518950437317784

Size Of tree : 33

Train Data Accuracy: 1.0 , Test Data Accuracy: 97.522%

Error: 2.478%

Iteration : 2

Testing: 50.0% , Training: 50.0%

Mean: 0.43731778425655976

Size Of tree : 29

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.105%

Error: 1.895%

Iteration : 3

Testing: 50.0% , Training: 50.0%

Mean: 0.45043731778425655

Size Of tree : 29

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.105%

Error: 1.895%

Iteration : 4

Testing: 50.0% , Training: 50.0%

Mean: 0.4402332361516035

Size Of tree : 31

Train Data Accuracy: 1.0 , Test Data Accuracy: 97.23%

Error: 2.77%

Iteration : 5

Testing: 50.0% , Training: 50.0%

Mean: 0.45043731778425655

Size Of tree : 33

Train Data Accuracy: 1.0 , Test Data Accuracy: 97.813%

Error: 2.187%

==> Testing: 50.0% , Training: 50.0%

==> Max Data Accuracy: 98.105% , Min Data Accuracy: 97.23% , Avg Data Accuracy: 97.75500000000001%

==> Max Size Of tree: 33 , Min Size Of tree: 29 , Avg Size Of tree: 31.0

==> Average Mean: 0.4461

Iteration : 1

Testing: 40.0% , Training: 60.0%

Mean: 0.46083788706739526

Size Of tree : 41

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.361%

Error: 1.639%

Iteration : 2

Testing: 40.0% , Training: 60.0%

Mean: 0.45719489981785066

Size Of tree : 39

Train Data Accuracy: 1.0 , Test Data Accuracy: 99.089%

Error: 0.911%

Iteration : 3

Testing: 40.0% , Training: 60.0%

Mean: 0.43897996357012753

Size Of tree : 33

Train Data Accuracy: 1.0 , Test Data Accuracy: 97.996%

Error: 2.004%

Iteration : 4

Testing: 40.0% , Training: 60.0%

Mean: 0.4262295081967213

Size Of tree : 39

Train Data Accuracy: 1.0 , Test Data Accuracy: 99.089%

Error: 0.911%

Iteration : 5

Testing: 40.0% , Training: 60.0%

Mean: 0.43169398907103823

Size Of tree : 27

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.543%

Error: 1.457%

==> Testing: 40.0% , Training: 60.0%

==> Max Data Accuracy: 99.089% , Min Data Accuracy: 97.996% , Avg Data Accuracy: 98.6156%

==> Max Size Of tree: 41 , Min Size Of tree: 27 , Avg Size Of tree: 35.8

==> Average Mean: 0.443

Iteration : 1

Testing: 30.0% , Training: 70.0%

Mean: 0.46601941747572817

Size Of tree : 31

Train Data Accuracy: 1.0 , Test Data Accuracy: 99.272%

Error: 0.728%

Iteration : 2

Testing: 30.0% , Training: 70.0%

Mean: 0.44902912621359226

Size Of tree : 43

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.301%

Error: 1.699%

Iteration : 3

Testing: 30.0% , Training: 70.0%

Mean: 0.46359223300970875

Size Of tree : 37

Train Data Accuracy: 1.0 , Test Data Accuracy: 97.816%

Error: 2.184%

Iteration : 4

Testing: 30.0% , Training: 70.0%

Mean: 0.48058252427184467

Size Of tree : 39

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.786%

Error: 1.214%

Iteration : 5

Testing: 30.0% , Training: 70.0%

Mean: 0.42718446601941745

Size Of tree : 39

Train Data Accuracy: 1.0 , Test Data Accuracy: 98.058%

Error: 1.942%

==> Testing: 30.0% , Training: 70.0%

==> Max Data Accuracy: 99.272% , Min Data Accuracy: 97.816% , Avg Data Accuracy: 98.4466%

==> Max Size Of tree: 43 , Min Size Of tree: 31 , Avg Size Of tree: 37.8

==> Average Mean: 0.4573