

Programming Assignment: 2

-Neelam Tikone

BAGGING:

- Depth 3, Bags 5

```
DEPTH: 3
Number of Models: 5
Predicted      | 0    1
-----
Actual         |
0              | 1553  540
1              | 0      32
Accuracy: 0.745882352941
Error: 0.254117647059
misclassifications: 540
```

- Depth 5, Bags 5

```
DEPTH: 5
Number of Models: 5
Predicted      | 0    1
-----
Actual         |
0              | 1553  540
1              | 0      32
Accuracy: 0.745882352941
Error: 0.254117647059
misclassifications: 540
```

- Depth 3, Bags 10

```
DEPTH: 3
Number of Models: 10
Predicted      | 0    1
-----
Actual         |
0              | 1553  540
1              | 0      32
Accuracy: 0.745882352941
Error: 0.254117647059
misclassifications: 540
```

- Depth 5, Bags 10

```

DEPTH: 5
Number of Models: 10
Predicted      | 0    1
-----
Actual         |
0              | 1553  540
1              | 0      32
Accuracy: 0.745882352941
Error: 0.254117647059
misclassifications: 540

```

Bagging by WEKA

=== Summary ===

Correctly Classified Instances	1593	74.9647 %
Incorrectly Classified Instances	532	25.0353 %
Kappa statistic	0.0812	
Mean absolute error	0.2504	
Root mean squared error	0.5004	
Relative absolute error	45.0609 %	
Root relative squared error	90.0298 %	
Total Number of Instances	2125	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.746	0.000	1.000	0.746	0.854	0.206	0.873	0.996	0
	1.000	0.254	0.057	1.000	0.107	0.206	0.873	0.057	1
Weighted Avg.	0.750	0.004	0.986	0.750	0.843	0.206	0.873	0.982	

=== Confusion Matrix ===

```

a    b  <-- classified as
1561 532 |    a = 0
0     32 |    b = 1

```

BOOSTING:

- Depth 1, Boosted Trees 5:

```
Depth : 1
Bags: 5
Predicted      | 0    1
-----
Actual         |
0              | 1597  496
1              | 0     32
Accuracy: 0.766588235294
Error: 0.233411764706
misclassifications: 496
```

- Depth 2, Boosted Trees 5:

```
Depth : 2
Bags: 5
Predicted      | 0    1
-----
Actual         |
0              | 1553  540
1              | 0     32
Accuracy: 0.745882352941
Error: 0.254117647059
misclassifications: 540
```

- Depth 1, Boosted Trees 10:

```
Depth : 1
Bags: 10
Predicted      | 0    1
-----
Actual         |
0              | 1597  496
1              | 0     32
Accuracy: 0.766588235294
Error: 0.233411764706
misclassifications: 496
```

- Depth 2, Boosted Trees 10:

```

Depth : 2
Bags: 10
Predicted      | 0    1
-----
Actual
0              | 1589 504
1              | 0     32
Accuracy: 0.762823529412
Error: 0.237176470588
misclassifications: 504

```

Adaboost using WEKA

=== Summary ===

Correctly Classified Instances	1611	75.8118 %
Incorrectly Classified Instances	514	24.1882 %
Kappa statistic	0.0847	
Mean absolute error	0.2452	
Root mean squared error	0.4889	
Relative absolute error	44.1395 %	
Root relative squared error	87.9716 %	
Total Number of Instances	2125	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.754	0.000	1.000	0.754	0.860	0.210	0.994	1.000	0
	1.000	0.246	0.059	1.000	0.111	0.210	0.994	0.571	1
Weighted Avg.	0.758	0.004	0.986	0.758	0.849	0.210	0.994	0.993	

=== Confusion Matrix ===

```

a    b  <-- classified as
1579 514 |    a = 0
0    32 |    b = 1

```