8. Note down the results in the below table.

|  |  |  |
| --- | --- | --- |
|  | Correctly classified instances | Incorrectly classified instances |
| Training Set | 92.2581 % | 7.7419 % |
| Cross validation(10 folds) | 83.871 % | 16.129 % |

9. Interpret the results from the ’confusion matrix’ in the classifier output.

For Training set

=== Confusion Matrix ===

a b <-- classified as

22 10 | a = DIE

2 121 | b = LIVE

For cross validation=10

=== Confusion Matrix ===

a b <-- classified as

14 18 | a = DIE

7 116 | b = LIVE

10. Change the parameters as below and compare the results with the results of the above model with default values. Confidence factor: 0.5 and Min number of folds: 2

**Results**

**Default value**

**Confidence factor : 0.25 Min number of folds : 3**

Results

Correctly Classified Instances 143 92.2581 %

Incorrectly Classified Instances 12 7.7419 %

Kappa statistic 0.7396

Mean absolute error 0.1272

Root mean squared error 0.243

Relative absolute error 38.5514 %

Root relative squared error 60.0371 %

Total Number of Instances 155

=== Confusion Matrix ===

a b <-- classified as

22 10 | a = DIE

2 121 | b = LIVE

**Min num of folds:2**

Correctly Classified Instances 143 92.2581 %

Incorrectly Classified Instances 12 7.7419 %

Kappa statistic 0.7396

Mean absolute error 0.1272

Root mean squared error 0.243

Relative absolute error 38.5514 %

Root relative squared error 60.0371 %

=== Confusion Matrix ===

a b <-- classified as

22 10 | a = DIE

2 121 | b = LIVE

**Confidence factor :0.5**

Correctly Classified Instances 149 96.129 %

Incorrectly Classified Instances 6 3.871 %

Kappa statistic 0.8791

Mean absolute error 0.0836

Root mean squared error 0.1857

Relative absolute error 25.3344 %

Root relative squared error 45.8866 %

=== Confusion Matrix ===

a b <-- classified as

28 4 | a = DIE

2 121 | b = LIVE

**Min num of folds:3 and Confidence factor:0.5**

Correctly Classified Instances 149 96.129 %

Incorrectly Classified Instances 6 3.871 %

Kappa statistic 0.8791

Mean absolute error 0.0836

Root mean squared error 0.1857

Relative absolute error 25.3344 %

Root relative squared error 45.8866 %

=== Confusion Matrix ===

a b <-- classified as

28 4 | a = DIE

2 121 | b = LIVE

**Cross validations folds:3 and confidence factor:0.5**

Correctly Classified Instances 125 80.6452 %

Incorrectly Classified Instances 30 19.3548 %

Kappa statistic 0.3142

Mean absolute error 0.2324

Root mean squared error 0.4217

Relative absolute error 70.2189 %

Root relative squared error 104.1582 %

**Comparision**

When both settings changed confidence factor :0.5 and num of folds:2 the Correctly classified percentage of instances have increased .

When only num of folds have changed (without changing the confidence factor) there is no change in the output.

But when the the cross validation folds have decreased to 3 and the confidence factor increased ro 0.5 the percentage of correctly classifie instances have decreased.