

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.