IT402 : Soft Computing
Lab Assignment 2

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Iris Dataset-

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{'setosa': 0, 'virginica': 1, 'versicolor': 2}

Pridiction for n folds where n=10

Predicted conclusion matrix [[3, 0, 0], [0, 6, 1], [0, 0, 5]]   Accuracy =  93.33333333333333

Predicted conclusion matrix [[9, 0, 0], [0, 3, 0], [0, 0, 3]]   Accuracy =  100.0

Predicted conclusion matrix [[7, 0, 0], [0, 4, 0], [0, 0, 4]]   Accuracy =  100.0

Predicted conclusion matrix [[7, 0, 0], [0, 3, 0], [0, 1, 4]]   Accuracy =  93.33333333333333

Predicted conclusion matrix [[4, 0, 0], [0, 5, 0], [0, 1, 5]]   Accuracy =  93.33333333333333

Predicted conclusion matrix [[4, 0, 0], [0, 5, 0], [0, 0, 6]]   Accuracy =  100.0

Predicted conclusion matrix [[5, 0, 0], [0, 2, 0], [0, 1, 7]]   Accuracy =  93.33333333333333

Predicted conclusion matrix [[3, 0, 0], [0, 9, 0], [0, 0, 3]]   Accuracy =  100.0

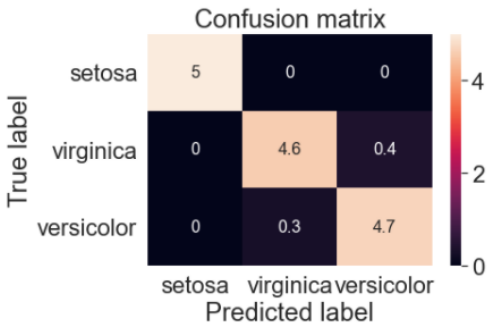
Predicted conclusion matrix [[4, 0, 0], [0, 6, 1], [0, 0, 4]]   Accuracy =  93.33333333333333

Predicted conclusion matrix [[4, 0, 0], [0, 3, 2], [0, 0, 6]]   Accuracy =  86.66666666666667

 Mean Accuracy:  95.33333333333334

 Average of all conclusion matrix  [[5.0, 0.0, 0.0], [0.0, 4.6, 0.4], [0.0, 0.3, 4.7]]

 Graphical representation of confusion matrix
```



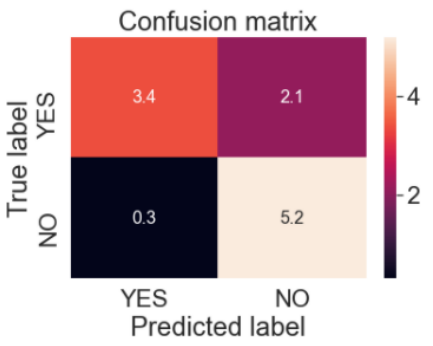
After applying naive bayes algorithm on iris data with n_fold=10 we are getting average accuracy=**95.33 percent** .Accuracy of All confusion matrix for n_fold are printed with their accuracy.Average of all the accuracy and average of all conclusion matrix is consider

Spect Dataset

```
{'YES': 0, 'NO': 1}
Pridiction for n folds where n=10
Predicted conclusion matrix [[3, 3], [1, 4]]   Accuracy =  63.63636363636363
Predicted conclusion matrix [[5, 0], [0, 6]]   Accuracy =  100.0
Predicted conclusion matrix [[4, 2], [1, 4]]   Accuracy =  72.72727272727273
Predicted conclusion matrix [[5, 2], [0, 4]]   Accuracy =  81.81818181818183
Predicted conclusion matrix [[3, 1], [0, 7]]   Accuracy =  90.9090909090909
Predicted conclusion matrix [[1, 3], [0, 7]]   Accuracy =  72.72727272727273
Predicted conclusion matrix [[1, 4], [0, 6]]   Accuracy =  63.63636363636363
Predicted conclusion matrix [[4, 3], [0, 4]]   Accuracy =  72.72727272727273
Predicted conclusion matrix [[4, 2], [0, 5]]   Accuracy =  81.81818181818183
Predicted conclusion matrix [[4, 1], [1, 5]]   Accuracy =  81.81818181818183

 Mean Accuracy:  78.1818181818182
 Average of all conclusion matrix  [[3.4, 2.1], [0.3, 5.2]]

 Graphical representation of confusion matrix
```



After applying a naive bayes algorithm on iris data with n_fold=10 we are getting average accuracy=**78.18 percent.** Accuracy of All the confusion matrix for n_fold are printed with their accuracy.Average of all the accuracy and average of all conclusion matrix is consider