IT402: Soft Computing

Lab Assignment 1 and 2

10-fold Naive Bayes algorithm

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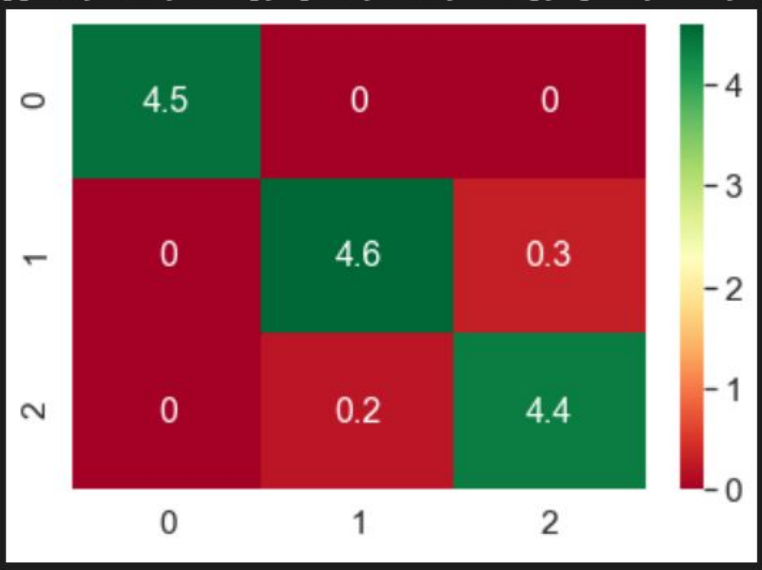
ALgorithm:

1. Convert the given dataset into frequency tables.
2. Generate Likelihood table by finding the probabilities of given features.
3. Now, use Bayes theorem to calculate the posterior probability.

Naive Bayes on IRIS Dataset

```
Scores: [100.0, 92.85714285714286, 100.0, 100.0, 92.85714285714286, 100.0,
85.71428571428571, 100.0, 92.85714285714286, 100.0]
Mean Accuracy: 96.429%
[[4.5, 0.0, 0.0], [0.0, 4.6, 0.3], [0.0, 0.2, 4.4]]
```



Naive Bayes on SPECTF Dataset

```
Scores: [90.9090909090909, 81.81818181818183, 72.72727272727273, 72.72727272727273,
81.81818181818183, 63.63636363636363, 63.63636363636363, 72.72727272727273, 72.7272
7272727273, 72.72727272727273]
Mean Accuracy: 74.545%
[[3.2, 2.3], [0.5, 5.0]]
```