6. Answers to the following questions:

1. How many samples in NBClassifer were in the training set?

75

1. How many samples in NBClassifer were in the test set?

75

1. Using the confusion matrix, manually calculate the Accuracy value. Does it match the value calculated by your program? If not, why? (Manually includes using a spreadsheet).

Accuracy = 0.96

Manual accuracy is equal to the one calculated by the program

1. Using the confusion matrix, manually calculate the Precision values for each iris variety. Do they match the values calculated by your program? If not, why?

Precision\_Iris-setosa = 1

Precision\_Iris-versicolor = 0.956

Precision\_Iris-virginica = 0.928

Manual precision is equal to the one calculated by the program

1. Using the confusion matrix, manually calculate the Recall values for each iris variety. Do they match the values calculated by your program? If not, why?

Recall\_Iris-setosa = 1

Recall\_Iris-versicolor = 0.92

Recall\_Iris-virginica = 0.963

Manual Recall is equal to the one calculated by the program

1. Using the confusion matrix, manually calculate the F1 values for each iris variety. Do they match the values calculated by your program? If not, why?

F1\_Iris-setosa = 1

F1\_Iris-versicolor = 0.94

F1\_Iris-virginica = 0.945

Manual F1 is equal to the one calculated by the program

Manual Confusion Matrix:

|  |  |
| --- | --- |
| **Encode** | **Class** |
| 0 | Iris-setosa |
| 1 | Iris-versicolor |
| 2 | Iris-virginica |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Actual** | | | |
| **P r e d** |  | Iris-setosa | Iris-versicolor | Iris-verginica |
| Iris-setosa | 24 | 0 | 0 |
| Iris-versicolor | 0 | 22 | 1 |
| Iris-verginica | 0 | 2 | 26 |

|  |  |  |
| --- | --- | --- |
| **Accuracy** | 72/75 | 0.96 |
| **P0** | 24/24 | 1 |
| **P1** | 22/23 | 0.956 |
| **P2** | 26/28 | 0.928 |
| **R0** | 24/24 | 1 |
| **R1** | 22/24 | 0.92 |
| **R2** | 26/27 | 0.963 |
| **F10** | 48/48 | 1 |
| **F11** | 44/47 | 0.94 |
| **F12** | 52/55 | 0.945 |