1. What is the percentage of correct calculation of both (Apple and Orange) in the total input

Of the test set?

78 7

6 43

Accuracy = T(Apple)+T(Orange) 78+43 121

------------------------------------------------------ = ---------------- = ------- = 0.90

T(Apple)+T(Orange)+F(Apple)+F(Orange) 78+7+6+43 134

1. What is the Overall Performance of the model ?

Accuracy = T(Apple)+T(Orange) 78+43 121

----------------------------------------------------- = ----------------- = ------- = 0.90

T(Apple)+T(Orange)+F(Apple)+F(Orange) 78+7+6+43 134

1. What is the percentage of correct calculation of Apple to the total input of the Apple in the test set ? Or

What is the percentage of correct calculation of Orange to the total input of the Orange in the test set?

Recall talks about the only correctly classified class 78 7

6 43

T(Apple) 78

----------------- ----- = 0.92

Total Apple in the test set 85

T(Orange) 43

----------------- ----- = 0.88

Total Orange in the test set 49

1. What is the percentage of correct classification of Apple to the sum of correctly classified a (Apple) and wrongly classified as (Apple) in the test set ? Or

What is the percentage of correct classification of orange to the sum of correctly classified a

(orange) and wrongly classified as (Orange) in the test set ?

Precision talks about the correctly and wrongly classified class 78 7

6 43

T(Apple) 78

----------------- ----- = 0.93

Total Apple+False Orange 78+6

T(Orange) 43

----------------- ----- = 0.86

Total Orange + False Apple 43+7

1. What if the Recall value is high and Precision value is low How will you validate your model Perfomance?

F1 Measure

What is the overall performance of Apple ? What is the overall performance of Orange?

Overall Performance of Apple = 2 \* Recall \* Precision 2 \* 0.92 \* 0.93

----------------------------- = -------------------------- = 0.92

Recall + Precision 0.92 + 0.93

Overall Performance of Orange = 2 \* Recall \* Precision 2 \* 0.88 \* 0.86

------------------------------ = ------------------------ = 0.87

Recall + Precision 0.88 + 0.86

1. Macro Average = Average of Precision , Recall , F1- Measure

Precision of Apple + Precision of Orange 0.93 + 0.86

---------------------------------------------------- = ---------------------- = 0.89

2 2

Recall of Apple + Recall of Orange 0.92 + 0.93

-------------------------------------------- = ------------------------ = 0.90

2 2

F1(Apple) + F1(Orange) 0.92 +0.87

------------------------------- = ------------------------ = 0.90

2 2

1. Weighted Average

Precision

What is the sum product of proportion rate (Weight) of each class ?

Precision (Apple) \* 85/134 + Precision (Orange) \* 49/134

Recall

What is the sum product of proportion rate (Weight) of each class ?

Recall (Apple) \* 85/134 + Recall (Orange) \* 49/134

F1 Measure

What is the sum product of proportion rate (Weight) of each class ?

F1(Apple) \* 85/134 + F1 (Orange) \* 49/134