

EVALUATION REPORT- CLASSIFICATION GIDSEARCH

1. RANDOM FOREST CLASSIFICATION ASSIGNMENT

The report:

	precision	recall	f1-score	support
0	0.94	0.93	0.93	85
1	0.88	0.90	0.89	49
accuracy			0.92	134
macro avg	0.91	0.91	0.91	134
weighted avg	0.92	0.92	0.92	134

1.What is the Overall Performance of Data?

Accuracy- 0.92

2.1.What is the Correct Classification of Not Purchased?(Recall-Correctly Classified)

Recall- 0.93 (Correct Performance Of Purchased)

2.2.What is the Correct Classification of Purchased?

Recall- 0.90

3.1. What is the Correct Classification of Correct and Wrong Purchased?(Precision Talks about Wrong and Correctly Classification of Data)

Precision- 0.88 (Not Purchased, But Classified as Purchased)

Precision- 0.94 (Purchased, But Classified as Not Purchased)

4. F1-Score (That measures a model's accuracy. It combines the precision and recall scores of a model.)

0 0.94 0.93 0.93

1 0.88 0.90 0.89

5. Macro Average

Precision(Correctly and Wrongly Classified)- 0.91

Recall(Correctly Classified)- 0.91

F1-Score - 0.91

6. Weighted Average

Precision(Proportion rate of Weight)- 0.92

Recall(Proportion rate of Weight)- 0.92

F1-Score(Proportion rate of Weight) - 0.92

2. DECISION TREE ASSIGNMENT

The report:

	precision	recall	f1-score	support
0	0.88	0.92	0.90	85
1	0.84	0.78	0.81	49
accuracy			0.87	134
macro avg	0.86	0.85	0.85	134
weighted avg	0.86	0.87	0.86	134

1.What is the Overall Performance of Data?

Accuracy- 0.87

2.1.What is the Correct Classification of Not Purchased?(Recall-Correctly Classified)

Recall- 0.92 (Correct Performance Of Purchased)

2.2.What is the Correct Classification of Purchased?

Recall- 0.78

3.1. What is the Correct Classification of Correct and Wrong Purchased?(Precision Talks about Wrong and Correctly Classification of Data)

Precision- 0.84 (Not Purchased, But Classified as Purchased)

Precision- 0.88 (Purchased, But Classified as Not Purchased)

4. F1-Score (That measures a model's accuracy. It combines the precision and recall scores of a model.)

0	0.88	0.92	0.90
1	0.84	0.78	0.81

5. Macro Average

Precision(Correctly and Wrongly Classified)- 0.86

Recall(Correctly Classified)- 0.85

F1-Score - 0.85

6. Weighted Average

Precision(Proportion rate of Weight)- 0.86

Recall(Proportion rate of Weight)- 0.87

F1-Score(Proportion rate of Weight) - 0.86

3.Logistic Grid Classification

precision	recall	f1-score	support	
0	0.89	0.93	0.91	85
1	0.87	0.80	0.83	49
accuracy			0.88	134
macro avg	0.88	0.86	0.87	134
weighted avg	0.88	0.88	0.88	134

1.What is the Overall Performance of Data?

Accuracy- 0.88

2.1.What is the Correct Classification of Not Purchased?(Recall-Correctly Classified)

Recall- 0.89 (Correct Performance Of Purchased)

2.2.What is the Correct Classification of Purchased?

Recall- 0.87

3.1. What is the Correct Classification of Correct and Wrong Purchased?(Precision Talks about Wrong and Correctly Classification of Data)

Precision- 0.87 (Not Purchased, But Classified as Purchased)

Precision- 0.89 (Purchased, But Classified as Not Purchased)

4. F1-Score (That measures a model's accuracy. It combines the precision and recall scores of a model.)

0 0.89 0.93

1 0.87 0.80

5. Macro Average

Precision(Correctly and Wrongly Classified)- 0.88

Recall(Correctly Classified)- 0.86

F1-Score - 0.87

6. Weighted Average

Precision(Proportion rate of Weight)- 0.88

Recall(Proportion rate of Weight)- 0.88

F1-Score(Proportion rate of Weight) - 0.88

4.Svm-Grid Classification Assignment

The report:

	precision	recall	f1-score	support
0	0.92	0.94	0.93	85
1	0.89	0.86	0.88	49
accuracy			0.91	134
macro avg	0.91	0.90	0.90	134
weighted avg	0.91	0.91	0.91	134

1.What is the Overall Performance of Data?

Accuracy- 0.91

2.1.What is the Correct Classification of Not Purchased?(Recall-Correctly Classified)

Recall- 0.94 (Correct Performance Of Purchased)

2.2.What is the Correct Classification of Purchased?

Recall- 0.86

3.1. What is the Correct Classification of Correct and Wrong Purchased?(Precision Talks about Wrong and Correctly Classification of Data)

Precision- 0.89 (Not Purchased, But Classified as Purchased)

Precision- 0.92 (Purchased, But Classified as Not Purchased)

4. F1-Score (That measures a model's accuracy. It combines the precision and recall scores of a model.)

0	0.92	0.94
1	0.89	0.86

5. Macro Average

Precision(Correctly and Wrongly Classified)- 0.91

Recall(Correctly Classified)- 0.90

F1-Score - 0.90

6. Weighted Average

Precision(Proportion rate of Weight)- 0.91

Recall(Proportion rate of Weight)- 0.91

F1-Score(Proportion rate of Weight) - 0.91

The Result of Random Forest Classification Algorithm is **good** accuracy value **0.92** compared to all Algorithm.