Machine Learning - Classification

S. No.	Model / Evaluation Matrics		Accuracy	Precision	Recall	F1-score	Macro avg.	Weighted avg.
1	Random Forest (RF)	0	0.90	0.93	0.92	0.92		
		1		0.86	0.88	0.87		
2	Decision Tree (DT)	0	0.87	0.88	0.93	0.90		
		1		0.86	0.78	0.82		
3	Support Vector Machine (SVM)	0	0.91	0.95	0.91	0.91		
		1		0.91	0.91	0.91		

Evaluation metrics / question for classification based on confusion matrix

1. What is the overall performance of the model? (Accuracy)
2. What is the percentage of correctly classified class? (Recall)
3. What is the percentage of correctly and wrongly classified class? (Precision)
4. What is the overall performance of the each model? (f1-score)
5. What is the average performance of precision / recall / f1-score? (Macro Average)
6. What is the sum of product of proportion rate of each class? (Weighted Average)

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1. RF

              precision    recall  f1-score   support

           0       0.93      0.92      0.92        85
           1       0.86      0.88      0.87        49

    accuracy                           0.90       134
   macro avg       0.89      0.90      0.90       134
weighted avg       0.90      0.90      0.90       134


2. DT
              precision    recall  f1-score   support

           0       0.88      0.93      0.90        85
           1       0.86      0.78      0.82        49

    accuracy                           0.87       134
   macro avg       0.87      0.85      0.86       134
weighted avg       0.87      0.87      0.87       134


3. SVM

              precision    recall  f1-score   support

           0       0.95      0.91      0.93        85
           1       0.85      0.92      0.88        49
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accuracy			0.91	134
macro avg	0.90	0.91	0.91	134
weighted avg	0.91	0.91	0.91	134