Machine Learning -> Supervised Learning -> Classification

Dataset : Social_Network_Ads

Classification Report based on Confusion Matrix : SVM,DT,RF Algorithms

Possible Questions raised	Evaluation Metrics	Support Vector Classifier	Decision Tree Classifier	Random Forest Classifier
What is the overall performance of the model ? How well it is performed on whole ? What percentage of the predictions made by the model are correct?	**Accuracy**	**0.95**	**0.91**	**0.93**
What is the correct performance of the Purchased? What is the correct Performance of not Purchased ?	**Recall**	**0.95** **0.95**	**0.82** **0.95**	**0.91** **0.93**
What is the performance of corect and wrongly classified of Purchased What is the performance of corect and wrongly classified of not Purchased ?	**Precision**	**0.88** **0.98**	**0.86** **0.93**	**0.83** **0.96**
What is the overall performance of Purchesed ? What is the overall performance of not Purchased ?	**F1 Score**	**0.91** **0.96**	**0.84** **0.94**	**0.87** **0.95**
What is the Average performance of correctly classified? What is the Average performance of correctly and wrongly classified? What is the Average of the overall performance ?	**Macro Average**	**0.95** **0.95** **0.94**	**0.88** **0.89** **0.89**	**0.92** **0.9** **0.91**
What is the exact proportion / weight of the correctly classified ? What is the exact proportion / weight of the correctly & wrongly classified ? What is the exact proportion of the overall performance ?	**weighted Average**	**0.95** **0.95** **0.95**	**0.91** **0.91** **0.91**	**0.93** **0.93** **0.93**

Result : Thereby, Support Vector Classifier has a Good Prediction compared to others based on overall performance.