



## Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID27580
Project Name	Smart Lender - Applicant Credibility Prediction for Loan Approval
Maximum Marks	10 Marks

### Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No	Parameter	Values	Screenshot															
1.	Metrics	<b>Regression Model:</b> MAE - , MSE - , RMSE - , R2 score - <b>Classification Model:</b> Confusion Matrix - , Accuracy Score- & Classification Report -	 <p>The screenshot displays a model performance dashboard. At the top, there is an ROC AUC curve showing a sigmoidal shape, indicating good classification performance. Below the curve is an SNS BARPLOT showing the performance of different models. The ROC AUC Score table is as follows:</p> <table><tr><th>Model</th><th>ROC AUC Score</th></tr><tr><td>Logistic Regression</td><td>0.85</td></tr><tr><td>Support Vector Machine</td><td>0.75</td></tr><tr><td>Random Forest</td><td>0.88</td></tr><tr><td>Decision Tree</td><td>0.78</td></tr></table>	Model	ROC AUC Score	Logistic Regression	0.85	Support Vector Machine	0.75	Random Forest	0.88	Decision Tree	0.78					
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2.	Tune the Model	Hyperparameter Tuning - Validation Method -	 <p>The screenshot shows the SweeTune hyperparameter tuning interface. It displays training and testing metrics for different models. The metrics are as follows:</p> <table><tr><th>Model</th><th>Training Accuracy</th><th>Testing Accuracy</th></tr><tr><td>Logistic Regression</td><td>0.85</td><td>0.75</td></tr><tr><td>Support Vector Machine</td><td>0.75</td><td>0.65</td></tr><tr><td>Random Forest</td><td>0.88</td><td>0.80</td></tr><tr><td>Decision Tree</td><td>0.78</td><td>0.70</td></tr></table>	Model	Training Accuracy	Testing Accuracy	Logistic Regression	0.85	0.75	Support Vector Machine	0.75	0.65	Random Forest	0.88	0.80	Decision Tree	0.78	0.70
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