

## Project Development Phase

### Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID13933
Project Name	Project - 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	<p>Random Forest Model Accuracy:</p> <p>Classification Report:</p>	<pre>print("Random Forest Model Testing Accuracy") print(accuracy_score(ytest,ypredR)) print("Random Forest Model Training Accuracy") print(accuracy_score(ytrain,ypred2R))</pre> <p>Random Forest Model Testing Accuracy 0.9405405405405406 Random Forest Model Training Accuracy 0.8997608997668997</p> <pre>print(classification_report(ytest,ypredR))</pre> <table><thead><tr><th></th><th>precision</th><th>recall</th><th>f1-score</th><th>support</th></tr></thead><tbody><tr><td>0</td><td>0.83</td><td>1.00</td><td>0.90</td><td>52</td></tr><tr><td>1</td><td>1.00</td><td>0.92</td><td>0.96</td><td>133</td></tr><tr><td>accuracy</td><td></td><td></td><td>0.94</td><td>185</td></tr><tr><td>macro avg</td><td>0.91</td><td>0.96</td><td>0.93</td><td>185</td></tr><tr><td>weighted avg</td><td>0.95</td><td>0.94</td><td>0.94</td><td>185</td></tr></tbody></table>		precision	recall	f1-score	support	0	0.83	1.00	0.90	52	1	1.00	0.92	0.96	133	accuracy			0.94	185	macro avg	0.91	0.96	0.93	185	weighted avg	0.95	0.94	0.94	185
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2.	Tune the Model	<p>Hyperparameter Tuning – No Tuning is performed</p> <p>Validation Method – In-sample Validation</p>	<pre>df.Gender=le.fit_transform(df.Gender) df.Married=le.fit_transform(df.Married) df.Education=le.fit_transform(df.Education) df.Self_Employed=le.fit_transform(df.Self_Employed) df.Property_Area=le.fit_transform(df.Property_Area) df.Loan_Status=le.fit_transform(df.Loan_Status) df.Dependents=le.fit_transform(df.Dependents)</pre>																														