

Project Development Phase
Model Performance Test

Date	19 February 2026
Team ID	LTVIP2026TMIDS62229
Project Name	Exploratory Analysis of Rain Fall Data in India for Agriculture
Maximum Marks	10 Marks

Model Performance Testing:

S.No.	Parameter	Values	Screenshot																
1	Metrics	Model Used – RandomForestClassifier Accuracy – 86% Precision – 84% Recall – 82% F1 Score – 83% ROC-AUC Score – 0.89	<p>Confusion Matrix</p> <table border="1"> <thead> <tr> <th colspan="2">Actual</th> <th colspan="2">Predicted</th> </tr> <tr> <th>No Rain</th> <th>Rain</th> <th>No Rain</th> <th>Rain</th> </tr> </thead> <tbody> <tr> <th>No Rain</th> <td>21010</td> <td>3008</td> <td>1110</td> </tr> <tr> <th>Rain</th> <td>3314</td> <td>—</td> <td>—</td> </tr> </tbody> </table>	Actual		Predicted		No Rain	Rain	No Rain	Rain	No Rain	21010	3008	1110	Rain	3314	—	—
Actual		Predicted																	
No Rain	Rain	No Rain	Rain																
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Rain	3314	—	—																
2	Tune the Model	Hyperparameter tuning using GridSearchCV Parameters tuned – n_estimators, max_depth Validation Method – 5-Fold Cross Validation Final Accuracy after tuning – 88%	—																