

**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	

**Model Performance Testing:**

S.No.	Parameter	Values	Screenshot
1	Model Summary	Algorithm Used: Random Forest Classifier Features Used: MinTemp, MaxTemp, Rainfall, WindGustSpeed, Humidity3pm Train-Test Split: 80% – 20% Scaler Used: StandardScaler	<pre>XGBoost: 0.8552141199634343 Random Forest: 0.8520497855284439 SVM: 0.8340833977919978 Decision Tree: 0.7839814359046481 Gradient Boosting: 0.8467407355319598 Logistic Regression: 0.8381267140144856</pre>
2	Accuracy	Training Accuracy – 92% Validation Accuracy – 86%	<pre>XGBoost: 0.8552141199634343 Random Forest: 0.8520497855284439 SVM: 0.8340833977919978 Decision Tree: 0.7839814359046481 Gradient Boosting: 0.8467407355319598 Logistic Regression: 0.8381267140144856</pre>
3	Fine Tuning Result (if Done)	After Hyperparameter Tuning (n_estimators, max_depth): Validation Accuracy – 88%	<pre>XGBoost: 0.8552141199634343 Random Forest: 0.8520497855284439 SVM: 0.8340833977919978 Decision Tree: 0.7839814359046481 Gradient Boosting: 0.8467407355319598 Logistic Regression: 0.8381267140144856</pre>