

Project Development Phase
Model Performance Test

Date	19 February 2026
Team ID	LTVIP2026TMIDS56565
Project Name	Rising Waters: A Machine Learning Approach to Flood Prediction
Maximum Marks	10 Marks

Model Performance Testing:

S.No.	Parameter	Values	Screenshot
1.	Metrics	<p>Classification Model:</p> <p>* Confusion Matrix: Standard 2x2 matrix for binary classification (Flood/No Flood).</p> <p>* Accuracy Score: 88.75% for the production model.</p> <p>* Classification Report: Detailed Precision, Recall, and F1-score for classes 0 (Safe) and 1 (Danger).</p>	
2.	Tune the Model	<p>* Hyperparameter Tuning: Configured with n_estimators=100 to ensure stability and ensemble strength.</p> <p>* Validation Method: Used a train_test_split with 80% training and 20% testing data to prevent overfitting.</p>	