Project Development Phase
Model Performance Test

Date	15 February 2026
Team ID	LTVIP2026TMIDS80318
Project Name	Weather-Based Prediction of Wind Turbine Energy Output: A Next-Generation Approach to Renewable Energy Management
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	**Regression Model:** MAE - , RMSE - , R2 score -	```--- Linear Regression ---``` MAE: 127.92238239675964 RMSE: 272.4266127437211 R² Score: 0.9582371841411887 --- Random Forest --- MAE: 95.83707802240345 RMSE: 261.2585354527591 R² Score: 0.9615911160408215
2.	Tune the Model	Validation Method -	```from sklearn.model_selection import train_test_split``` X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)