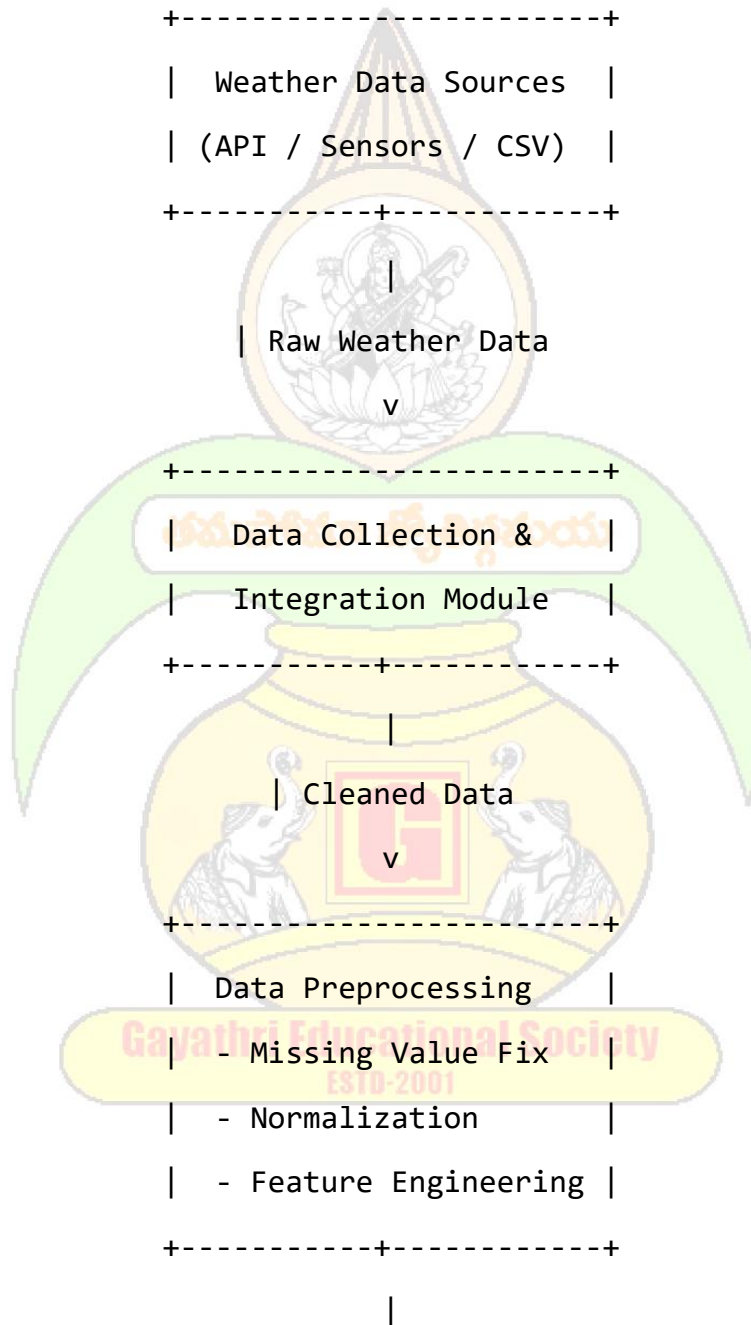


Weather-Based Prediction of Wind Turbine Energy Output: A Next-Generation Approach to Renewable Energy Management

DATE	28-02-2026
TEAM ID	LTVIP2026TMIDS90651
PROJECT NAME	Weather-Based Prediction of Wind Turbine Energy Output: A Next-Generation Approach to Renewable Energy Management
MAXIMUM MARKS	3 MARKS

3.3 - Data Flow Diagram:



Weather-Based Prediction of Wind Turbine Energy Output: A Next-Generation Approach to Renewable Energy Management

| Processed Features

v

+-----+

| Machine Learning |

| Model Module |

| (Random Forest / |

| XGBoost / LSTM) |

+-----+

|

| Predicted Wind Power

v

+-----+

| Performance Evaluation|

| (RMSE, MAE, R^2) |

+-----+

|

| Final Output

v

+-----+

| Energy Management |

| Dashboard / Grid |

| Optimization System |

+-----+