**Model Development Phase Template**

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| Date | 17 July 2024 |
| Team ID | xxxxxx |
| Project Title | Predicting The Energy Output Of Wind Turbine Based On Weather Condition |
| Maximum Marks | 6 Marks |

**Model Selection Report**

In the forthcoming Model Selection Report, various models will be outlined, detailing their descriptions, hyperparameters, and performance metrics, including Accuracy or F1 Score. This comprehensive report will provide insights into the chosen models and their effectiveness.

**Model Selection Report:**

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| --- | --- | --- | --- |
| **Model** | **Description** | **Hyperparameters** | **Performance Metric (e.g., Accuracy, F1 Score)** |
| Random Forest Regressor | The RandomForestRegressor is an ensemble learning method that operates by constructing multiple decision trees during training and outputting the average of the predictions of the individual trees. This approach helps to improve the predictive accuracy and control over-fitting compared to a single decision tree. | n\_estimators, max\_depth, max\_leaf\_nodes | Mean Absolute Error = 168.36, R2 Score = 0.90 |
| Linear Regression | The LinearRegression algorithm attempts to model the relationship between the target variable and predictor variables by fitting a linear equation of the form:  y^=β0+β1x1+β2x2+…+βnxn | NaN | Mean Absolute Error = 188.71, R2 Score = 0.89 |