

## Model Development Phase Template

Date	23 September 2024
Team ID	LTVIP2024TMID24992
Project Title	Rainfall Prediction Using Machine Learning
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:

Model	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
<b>XGBoost</b>	Utilizes gradient boosting for efficient, high-performance classification.	-	Accuracy score = 78%
<b>Random Forest Classifier</b>	Builds multiple decision trees for robust predictions.	-	Accuracy score = 83%
<b>Decision Tree Classifier</b>	Uses a tree-like structure for decision making.	-	Accuracy score = 76%

<b>Gradient Boosting Classifier</b>	Combines weak learners for powerful predictions.	-	Accuracy score = <b>81%</b>
<b>Logistic Regression</b>	Employs regression to classify binary targets.	-	Accuracy score = <b>76%</b>
<b>K neighbors Classifier</b>	Predicts based on the 'k' nearest data points.	-	Accuracy score = <b>73%</b>