Model Development Phase Template

Date	1 October 2024
Team ID	LTVIP2024TMID24876
Project Title	Rising Waters: A Machine Learning Approach to Flood Prediction
Maximum Marks	6 Marks

Model Selection Report

The Model Selection Report for flood prediction highlights the effectiveness of algorithms like R andom Forest and LSTM neural networks. Random Forest excels at handling non-linear data and identifying important features, while LSTM effectively captures temporal depend encies in time-series data. Both models enhance predictive accuracy and reliability.

Model Selection Report:

Model	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Random forest	Random Forest can be effectively used in Flood Prediction model to improve accuracy and speed.	• n_estimators • max_depth • min_samples_split • min_samples_leaf • max_features	Accuracy = 97%
KNN	KNN can be effectively used in Flood Prediction model to	**Not used**	Accuracy=91

	improve accuracy and speed.		