Model Development Phase Template

Date	15 March 2024
Team ID	735799
Project Title	WORLD HAPPINESS REPORT
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)
Linear Regression	A basic statistical method to understand the relationship between dependent and independent variables. It's useful for understanding how various factors (features) contribute to	Regularization parameter	R^2 Score (coefficient of determination)

	overall happiness.		
Random Forest Regressor	• An ensemble learning method that uses multiple decision trees to improve predictive accuracy and control over-fitting. •	• Number of trees (n_estimators) • Maximum depth of trees (max_depth) • Minimum samples split (min_samples_split)	• • Mean Squared Error (MSE), R² Score •
Gradient Boosting Regressor	• An ensemble technique that builds trees sequentially to correct errors made by previous trees, aiming for better accuracy. •	• Learning rate • Number of boosting stages (n_estimators) • Maximum depth of trees (max_depth)	Mean Absolute Error (MAE), R² Score