

Model Development Phase

Date	25 June 2025
Team ID	SWUID20250176209
Project Title	Machine Learning Approach for Employee Performance Prediction
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 R^2 Score. This comprehensive report will provide insights into the chosen models and their effectiveness.

Model	Description	Hyperparameters	Performance Metric (R^2)
Linear Regression	Simple linear model; easy to interpret, serves as a baseline model but may underperform with non-linear data.	Default	$R^2 = 30\%$
Random Forest	Ensemble of decision trees; handles both numerical and categorical features, reduces overfitting, and performs well with minimal tuning.	Default	$R^2 = 60\%$
XGBoost	Gradient-boosted trees; optimized for performance, handles complex patterns, and provides fine-tuned predictions.	Default	$R^2 = 62\%$