Model Development Phase Template

Date	12 July 2024
Team ID	xxxxxx
Project Title	Human Resource Management Predicting Employee Promotions 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)
DecisionTreeClassifier	Splits data into branches to form decision nodes, aiming for homogeneous subsets.	Random_state=42	Accuracy :- 93.913% F1 score:- 94%
RandomForestClassifier	Constructs multiple decision trees and combines their outputs to improve	Random_state=42 N_estimators=100	Accuracy :- 95.595% F1 score :- 96%

	accuracy and reduce overfitting.		
KNeighborsClassifier	Classifies data points based on the majority class among its k-nearest neighbors.	N_neighbors=5	Accuracy:- 90.573% F1 score :- 91%
GradientBoostingClassifier	Builds an ensemble of weak decision trees, improving accuracy by focusing on misclassified samples.	Random_state=42	Accuracy:- 85.856% F1 score :- 87%