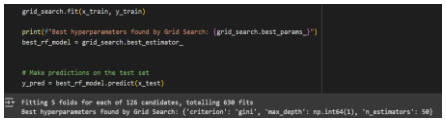
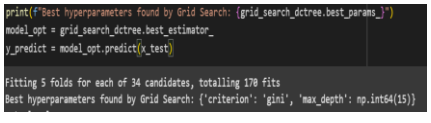
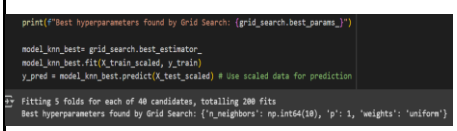
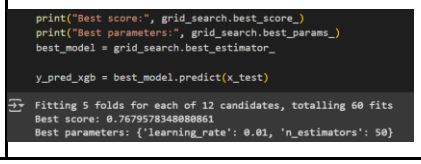
Model Development Phase Template

Date	15 March 2024
Team ID	SWTID1749835773
Project Title	SmartLender - Applicant Credibility Prediction for Loan Approval
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	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Random Forest	Ensemble of decision trees; robust, handles complex relationships, reduces overfitting, and provides feature importance for loan approval prediction.		Accuracy score = 73.3%
Decision Tree	Simple tree structure; interpretable, captures non-linear relationships, suitable for initial insights into loan approval patterns.		Accuracy score = 78.8%
KNN	Classifies based on nearest neighbors; adapts well to data patterns, effective		Accuracy score = 74%

	for local variations in loan approval criteria.		
XGB Boost	XGB boost with trees; optimizes predictive performance, handles complex relationships, and is suitable for accurate loan approval predictions.		Accuracy score = 78.8%