Model Development Phase Template

Date	20 June 2024
Team ID	740018
Project Title	Determine: Loan from KIVA crowdfunding data
Maximum Marks	6 Marks

Model Selection Report

The Model Selection Report of KIVA crowdfunding data identifies the optimal predictive model by comparing performance metrics of various algorithms, ensuring accurate forecasting of loan outcomes for effective resource allocation.

Model Selection Report:

Model	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Logistic Regression	A statistical model that uses logistic function to model a binary dependent variable	Regularization: L2, Solver: liblinear	Accuracy: 85%, F1 Score: 0.84
Random Forest	An ensemble learning method using multiple decision trees for classification.	n_estimators: 100, max_depth: 10, min_samples_split: 2	Accuracy: 88%, F1 Score: 0.87

XGBoost	An optimized gradient boosting algorithm.	n_estimators: 100, learning_rate: 0.1, max_depth: 6	Accuracy: 89%, F1 Score: 0.88
SVM	A supervised learning model for classification	Kernel: RBF, C: 1.0, gamma: scale	Accuracy: 86%, F1 Score: 0.85
Neural Network	A deep learning model with multiple layers of neurons.	Layers: 3, Neurons per layer: [64, 32, 16], Activation: ReLU	Accuracy: 90%, F1 Score: 0.89