

Model Development Phase Template

Date	4 June 2024
Team ID	SWTID1720076203
Project Title	Anemia Sense: Leveraging Machine Learning For Precise Anemia Recognitions
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)
Logistic Regression	Logistic regression is a supervised machine learning algorithm that accomplishes binary classification tasks.	-	F1 = 1
Random Forest	Ensemble of decision trees; robust, handles complex relationships, reduces overfitting, and provides feature importance for anemia diagnosis.	-	F1=1
Decision Tree	Simple tree structure; interpretable, captures non-linear relationships, suitable for initial insights into anemia diagnosis patterns.	-	F1=1

Gaussian Naive Bayes	Interpretable model for initial exploration, good at capturing some non-linear relationships in anemia diagnosis patterns.	-	F1=0.940
SVM	Powerful for creating separation hyperplanes to divide healthy and anemic patients.	-	F1=0.902
Gradient Boosting	Gradient boosting with trees; optimizes predictive performance, handles complex relationships, and is suitable for anemia diagnosis.	-	F1=1