Model Development Phase Template

Date	23 September 2024
Team ID	LTVIP2024TMID25021
Project Title	Prediction and Analysis of liver patient data 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	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Random Forest	Ensemble of decision trees; classifies a new liver object, the input vector is passed through each tree in the forest, and the tree that votes for most likely class wins	-	Accuracy score = 85%
Decision Tree	Simple tree structure can be used to predict liver disease by analyzing data and generating if then rules can be used to determine if the patient has liver disease.	-	Accuracy score = 73%
KNN	Classifies based on nearest neighbors; adapts well to data patterns, effective	-	Accuracy score = 71%

	for local variations in disease prediction criteria.		
Support Vector machine	SVMs are supervised models that can be used to predict liver disease. SVMs analyze the data and recognize patterns to classify liver disease.	-	Accuracy score = 71%
Logistic Regression	Logistic regression is a statistical method that estimates the probability of an event occurring based on the given dataset.	-	Accuracy score = 73%