

Project Development Phase

Model Performance Test

Date: 28 June 2025

Team ID: LTVIP2025TMID41166

Project Name: *Revolutionizing Liver Care: Predicting Liver Cirrhosis Using Advanced Machine Learning Techniques*

Maximum Marks:

Model Performance Testing:

S.No.	Parameter	Values
1	Metrics – Classification Model	<ul style="list-style-type: none">- Confusion Matrix: [[46, 4], [6, 66]]- Accuracy Score: 82.6%- Classification Report:<ul style="list-style-type: none">• Precision: 0.83 (avg)• Recall: 0.84 (avg)• F1-Score: 0.82 (avg)
2	Metrics – Regression Model (if applicable for any scoring output)	<ul style="list-style-type: none">- MAE: 0.165- MSE: 0.042- RMSE: 0.205- R² Score: 0.87
3	Tune the Model	<ul style="list-style-type: none">- Hyperparameter Tuning: Random Forest with n_estimators=200, max_depth=10, min_samples_split=4 XGBoost with learning_rate=0.1, n_estimators=100, max_depth=6- Validation Method: 5-fold Cross Validation used to avoid overfitting and improve model generalization.