Project Development Phase
Model Performance Test

Date	30 june 2025
Team ID	LTVIP2025TMID60884
Project Name	Revolutionizing liver care; Predicting liver cirrhosis using advanced machine learning techniques
Maximum Marks	

Model Performance Testing:

Model Performance Testing Template – Liver Cirrhosis Prediction Using Advanced ML Techniques

S.No.	Parameter	Screenshot / Values
1.	**Data Rendered**	Dataset: Indian Liver Patient Dataset (ILPD), UCI Liver Disorders Dataset, or Custom Clinical Dataset Total Records: _____ Features: Age, Gender, Total Bilirubin, Direct Bilirubin, Alkaline Phosphatase, SGPT, SGOT, Total Proteins, Albumin, A/G Ratio, etc.
2.	**Data Preprocessing**	- Null value handling (imputation strategies) - Outlier removal (IQR/Z-score) - Feature scaling (StandardScaler/MinMax) - Label encoding for categorical variables - Train-test split (e.g., 80:20)
3.	**Utilization of Filters**	- Feature selection using Mutual Information / ANOVA F-test - Correlation filtering to remove multicollinearity - Domain-specific thresholds applied to lab test results
4.	**Calculation Fields Used**	- Synthetic features (e.g., Bilirubin Ratio = Total/Direct) - Feature importance scores from model (e.g., SHAP values) - Risk score computation (model probability outputs) - Liver Function Index (custom field from combined lab values)
5.	**Dashboard Design**	No. of Visualizations / Graphs - ___ - ROC-AUC Curve - Confusion Matrix - Feature Importance Plot - Patient-wise Risk Prediction Visualization - Model Accuracy, Precision, Recall, F1 Score trends
6.	**Story Design**	No. of Visualizations / Graphs - ___ - Step-by-step walk-through from data acquisition to prediction - Timeline of model performance improvements

S.No.	Parameter	Screenshot / Values
		Clinical interpretability and decisio- n support system integration - Impact analysis on patient outcomes