

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	19 July 2025
Team ID	LTVIP2025TMID41526
Project Name	Revolutionizing Liver Care: Predicting Liver Cirrhosis Using Advanced Machine Learning Techniques
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-I	Upload Patient Health Data	Upload Patient Health Data
FR-2	Model Training	Train models using ML algorithms (KNN, SVC, Logistic Regression, XGBoost)
FR-3	Prediction Output	Predict liver cirrhosis outcome (Yes/No) based on new input data
FR-4	Model Evaluation	Display Accuracy, F1-Score, Confusion Matrix for each model

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-I	Usability	Easy to use via Google Colab; potential Flask UI for end-users
NFR-2	Security	Dataset used locally; No external data exposure (safe in offline or cloud-secured environments)
NFR-3	Reliability	Trained with multiple models; outputs cross-verified using metrics
NFR-4	Performance	Handles 950 records efficiently; optimized with inmemory processing

NFR-5	Availability	Executable anytime on Google Colab or can be deployed via cloud
NFR-6	Scalability	Can be scaled with Flask/Streamlit UI + cloud deployment with REST APIs