

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

Date	27 June 2025
Team ID	TVP2025TMD42853
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-1	User Registration	Registration through Form (basic info, name, email)
FR-2	Patient Data Submission	Input form for 34 medical features (dropdowns, numbers, selections)
FR-3	Prediction Generation	Run model on submitted data and generate liver cirrhosis prediction
FR-4	Result Display	Output page with clear message: "At Risk" or "Not at Risk"
FR-5	Model Management	Load trained RandomForest model and normalizer for prediction
FR-6	Reset / Refill	Allow user to clear inputs or refill new patient data

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Easy-to-use, form-based interface with user-friendly dropdowns & validation
NFR-2	Security	No personal data stored, local-only deployment, input sanitation
NFR-3	Reliability	Stable performance on real-world data, verified output accuracy
NFR-4	Performance	Real-time prediction (within 1 second), lightweight model

NFR-5	Availability	Available locally anytime; can be hosted on PythonAnywhere or Heroku
NFR-6	Scalability	Architecture supports future expansion (cloud storage, login system)