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

Date	16 June 2025
Team ID	LTVIP2025TMID35624
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 Confirmation for contacting	Confirmation via Email
FR-2	Prediction Interface	- Form to input medical details - Submit to backend API - Display liver cirrhosis prediction (YES/NO)
FR-3	Contact Form	- Collect name, email, subject, and message - Send email to admin via Gmail API
FR-4	Model Management	- Load trained model at API start - Preprocess input data - Generate predictions using serialized model
FR-5	Admin Notification	Admin receives user contact information via email
FR-6	API Endpoints	- /api/predict: For prediction - /api/contact: For contact form - /: Status check route

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	User interface should be simple, responsive, and accessible for all users
NFR-2	**Security**	User inputs and emails are sanitized, backend endpoints are protected
NFR-3	**Reliability**	The model and server must consistently provide accurate and valid predictions
NFR-4	**Performance**	Model predictions should respond in under 2 seconds for API requests
NFR-5	**Availability**	The system should be available 24/7 with minimal downtime
NFR-6	**Scalability**	The system should scale to support thousands of users via cloud infrastructure