**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 27 June 2025 |
| Team ID | **LTVIP2025TMID35735** |
| 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.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | User Registration | Registration through Form  Registration through Gmail  Registration through LinkedIN |
| FR-2 | User Confirmation | Confirmation via Email  Confirmation via OTP |
| FR-3 | Liver Disease Prediction | Input liver-related parameters  Receive prediction (Low/Moderate/High Risk)  View explanation (e.g., SHAP-based model output) |
| FR-4 | Report Generation | Generate & download PDF report  Include risk level and summary |
| FR-5 | Feedback System | Collect user feedback on prediction accuracy  Store feedback for model improvement |
| FR-6 | Admin Dashboard | View user activity logs  View model prediction statistics |

**Non-functional Requirements:**

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

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | Intuitive and clean UI for patients and health professionals |
| NFR-2 | **Security** | Secure login and data encryption for health data and user credentials |
| NFR-3 | **Reliability** | System should give consistent and accurate predictions under valid input |
| NFR-4 | **Performance** | System should respond with prediction results within 2–3 seconds |
| NFR-5 | **Availability** | Web app should maintain 99.9% uptime during health service access windows |
| NFR-6 | **Scalability** | Ability to handle increasing patient records and concurrent users |