**Project Design Phase**

**Proposed Solution**

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| Date | 30 June 2025 |
| Team ID | LTVIP2025TMID35420 |
| Project Name | Revolutionizing Liver Care : Predicting Liver Cirrhosis Using Advanced Machine Learning Techniques |
| Maximum Marks | 2 Marks |

**Proposed Solution:**

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| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | Late diagnosis and lack of accessible screening mechanisms for liver cirrhosis, leading to high mortality and treatment costs. |
|  | Idea / Solution description | Develop a machine learning-based tool that uses patient lab data and health records to predict liver cirrhosis risk. The tool will offer real-time risk scores and aid doctors in early intervention. |
|  | Novelty / Uniqueness | Combines routine clinical data with AI models for early-stage cirrhosis detection, previously limited to invasive tests. Incorporates explainable AI to build clinician trust. |
|  | Social Impact / Customer Satisfaction | Improves quality of life through early detection, increases survival rates, reduces burden on healthcare systems, and empowers rural clinics with diagnostic capabilities. |
|  | Business Model (Revenue Model) | Freemium model for individuals; subscription-based SaaS for clinics and hospitals. Potential partnerships with diagnostic labs and health-tech platforms. |
|  | Scalability of the Solution | Highly scalable due to its digital nature. Can be adapted to other liver-related conditions and integrated into national health programs. |