# Project Design Phase
## Proposed Solution

| Date | 28 June 2025 |
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| Team ID | **LTVIP2025TMID41166** |
| Project Name | Revolutionizing Liver Care: Predicting Liver Cirrhosis Using Advanced Machine Learning Techniques |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

| S.No. | Parameter | Description |
|---|---|---|
| 1. | Problem Statement (Problem to be solved) | Liver cirrhosis is often diagnosed too late, when damage is already severe. Current methods are either invasive, expensive, or not available in smaller hospitals. Doctors need a quicker, non-invasive way to detect it early. |
| 2. | Idea / Solution description | We plan to build a machine learning model that can predict liver cirrhosis based on simple blood test results. This model will be deployed as a web app so doctors can use it easily and get instant predictions. |
| 3. | Novelty / Uniqueness | Instead of relying on invasive tests like biopsies or costly scans, our solution uses existing blood test data and machine learning to provide fast, affordable, and non-invasive predictions. |
| 4. | Social Impact / Customer Satisfaction | Early detection means patients get treatment sooner, potentially saving lives. Doctors will feel more confident, and hospitals can save costs on expensive procedures. It makes healthcare better and more accessible. |
| 5. | Business Model (Revenue Model) | The web app could be offered to hospitals and clinics via subscription, or as a one-time licensing fee for using the prediction tool. Free trials or low-cost plans could help adoption. |
| 6. | Scalability of the Solution | The same method can be adapted for other liver diseases or even other medical conditions, making it scalable to a larger healthcare market. More hospitals and doctors can use it anywhere via the web. |