Project Design Phase
Problem – Solution Fit Template

Date	29 June 2025
Team ID	LTVIP2025TMID60884
Project Name	Revolutionizing Liver Care: Predicting Liver cirrhosis using Advanced Machine Learning Techniques
Maximum Marks	2 Marks

Problem Solution Fit Template

Revolutionizing Liver Care

1. Customer Segment

Who is experiencing the problem?

Patients with chronic liver diseases (e.g., cirrhosis, fatty liver, hepatitis)

Caregivers and families of liver disease patients

Primary care physicians and herpetologists

Rural and underserved populations with limited access to liver diagnostics

2. Problem Description

What are the top 1-3 problems your customers face?

Delayed Diagnosis: Liver diseases often go undetected until advanced stages due to lack of early symptoms and limited screening tools.

Fragmented Care: Lack of integrated care and data-sharing between healthcare providers leads to poor patient management.

Cost & Accessibility Barriers: Expensive diagnostic tests, travel for specialty care, and unavailability of liver specialists in remote areas.

3. Current Alternatives

How are customers currently trying to solve their problem?

Periodic visits to general practitioners with limited liver-specific screening

Referrals to specialists (often delayed or skipped)

Relying on basic liver function tests (LFTs) without predictive analytics

Internet-based self-diagnosis or ignoring symptoms due to awareness gaps

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4. Your Solution

How do you solve their problems in a new or significantly better way?

AI-Powered Liver Health Risk Prediction Tool: Uses patient data (labs, imaging, history) to detect early risk signs

Remote Monitoring & Tele-Herpetology: Connected devices and mobile apps for continuous care and specialist consultation

Integrated Patient Journey Platform: From symptom tracking to specialist connection and personalized care pathways

Affordable Screening Kits: Community-based liver health diagnostics and home sample collection

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5. Behavioral Insight

What existing behaviors can your solution align with?

Rising use of mobile health apps and wearable devices

Increased health awareness post-COVID

Government and NGO outreach programs for NCDs (Non-Communicable Diseases)

Families supporting chronic disease management at home

Template: