

**Project Design Phase**  
**Problem – Solution Fit**

Date	JUNE 2025
Team ID	<b>LTVIP2025TMID40719</b>
Project Name	Revolutionizing Liver Care: Predicting Liver Cirrhosis using Advanced Machine Learning Techniques
Maximum Marks	2 Marks

**Problem – Solution Fit :**

Define CS, fit into CC	<b>1. CUSTOMER SEGMENT(S)</b> <span>CS</span>  <b>Individuals at risk of liver diseases, especially due to alcohol consumption and hereditary factors.</b>	<b>6. CUSTOMER CONSTRAINTS</b> <span>CC</span>  <b>Limited access to specialists, delayed test results, lack of awareness.</b>	<b>5. AVAILABLE SOLUTIONS</b> <span>AS</span>  <b>Manual diagnosis based on multiple clinical tests interpreted by doctors.</b>	Explore AS, differentiate
	<b>2. JOBS-TO-BE-DONE / PROBLEMS</b> <span>J&amp;P</span>  <b>Predict the likelihood of liver cirrhosis early to enable timely medical intervention.</b>	<b>9. PROBLEM ROOT CAUSE</b> <span>RC</span>  <b>Late diagnosis due to symptom similarity with other diseases and lack of predictive analysis.</b>	<b>7. BEHAVIOUR</b> <span>BE</span>  <b>Patients visit clinics/hospitals when symptoms worsen or during routine checkups.</b>	
	<b>3. TRIGGERS</b> <span>TR</span>  <b>Family history, abnormal medical test results,</b>	<b>10. YOUR SOLUTION</b> <span>SL</span>  <b>A machine learning-based tool that predicts liver cirrhosis risk using patient data to enable early detection and intervention.</b>	<b>8. CHANNELS of BEHAVIOUR</b> <span>CH</span>  <b>Hospital visits, health checkup camps, diagnostic centers.</b>	
Identify strong TR & EM	<b>4. EMOTIONS: BEFORE / AFTER</b> <span>EM</span>  <b>Before – anxious, helpless; After – informed, proactive.</b>		<b>8.2 OFFLINE</b>  <b>health checkup camps, diagnostic centers</b>	Extract online & offline CH of BE