

## Project Design Phase

### Problem – Solution Fit

Date	21 February 2026
Team ID	LTVIP2026TMIDS65711
Project Name	Online Payments Fraud Detection using Machine Learning
Maximum Marks	2 Marks

#### Problem – Solution Fit Template:

The Problem-Solution Fit simply means that you have found a problem with your customer and that the solution you have realized for it actually solves the customer's problem. It helps entrepreneurs, marketers and corporate innovators identify behavioral patterns and recognize what would work and why

#### Purpose:

- ☐ Solve complex problems in a way that fits the state of your customers.
- ☐ Succeed faster and increase your solution adoption by tapping into existing mediums and channels of behavior.
- ☐ Sharpen your communication and marketing strategy with the right triggers and messaging.
- ☐ Increase touch-points with your company by finding the right problem-behavior fit and building trust by solving frequent annoyances, or urgent or costly problems.
- ☐ **Understand the existing situation in order to improve it for your target group.**

#### Template:

Proposed Solution Fit Canvas: Online Payment Fraud Detection Using Machine Learning								
1	CUSTOMER SEGMENT(S)	CS	C	6. CUSTOMER CONSTRAINTS	CC	5	5. AVAILABLE SOLUTIONS	AS
Banks, fintech companies, e-commerce platforms Online shoppers and merchants Fraud prevention teams			<ul style="list-style-type: none"><li>• High transaction volumes increasing detection</li><li>• Protect users from financial fraud</li><li>• Minimize false positives to avoid disrupting genuine transactions.</li></ul>			<ul style="list-style-type: none"><li>• Traditional rule-based fraud detection systems</li><li>• Manual review processes with human analysts</li><li>• Basic transaction monitoring tools</li></ul>		
4	JOBS-TO-BE-DONE / PROBLEMS	J&P	R	PROBLEM ROOT CAUSE	RC	6	BEHAVIOUR	BE
<ul style="list-style-type: none"><li>• Detect fraudulent online transactions in real-time</li><li>• Protect users from financial fraud</li><li>• Minimize false positives to avoid disrupting genuine transactions</li></ul>			<ul style="list-style-type: none"><li>• Sophisticated fraud tactics outsmart static rules</li><li>• Delayed fraud detection leads to financial losses</li><li>• Growing online transaction volume makes manual review inefficient.</li></ul>			<ul style="list-style-type: none"><li>• Fraudsters use stolen credentials, fake accounts, test cards.</li><li>• Rapidly adapt tactics to avoid detection</li><li>• Exploit security gaps in payment systems for large-scale fraud attempts.</li></ul>		
3	TRIGGERS	TR	S	YOUR SOLUTION	SL	9	CHANNELS of BEHAVIOUR	CH
<ul style="list-style-type: none"><li>• Real-time fraud detection for instantaneous response</li><li>• Adaptive learning to update detection with evolving fraud patterns</li><li>• Comprehensive analytics for deeper insights</li></ul>			<ul style="list-style-type: none"><li>• Develop an intelligent, real-time fraud detection system using machine learning</li><li>• Use algorithms (Random Forest, XGBoost) to analyze transaction data.</li><li>• Provide real-time fraud prediction triggers alerts and storing logs</li></ul>			<ul style="list-style-type: none"><li>• <b>ONLINE</b> Banks and e-commerce platforms process payments via web interfaces and mobile apps.</li><li>• <b>OFFLINE</b> Fraud prevention teams review flagged transactions for follow-up action</li></ul>		
7	TRIGGERS	TR	S	YOUR SOLUTION	SL	9	CHANNELS of BEHAVIOUR	CH
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<b>References:</b> <ul style="list-style-type: none"><li>• AWS Architecture Center – <a href="https://aws.amazon.com/architecture">https://aws.amazon.com/architecture</a></li><li>• IBM Cloud Architecture Center – <a href="https://www.ibm.com/cloud/architecture">https://www.ibm.com/cloud/architecture</a></li><li>• How to Draw Useful Technical Architecture Diagrams (Medium) – <a href="https://medium.com/the-internal-startup/how">https://medium.com/the-internal-startup/how</a></li></ul>								

#### References:

- <https://www.ideahackers.network/problem-solution-fit-canvas/>

2. <https://medium.com/@epicantus/problem-solution-fit-canvas-aa3dd59cb4fe>