

Project Design Phase

Problem – Solution Fit Template

Date	15 February 2025
Team ID	LTVIP2026TMIDS42143
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:

Problem-Solution fit canvas 2.0

Purpose / Vision: Payment Fraud Detection using ML

<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Define CS, its help CC</div> <div> 1. CUSTOMER SEGMENT(S) CS Financial institutions (banks, credit card companies), e-commerce merchants, payment processors, fintech companies </div> </div>	<div style="display: flex; justify-content: space-between;"> <div></div> <div> 6. CUSTOMER CONSTRAINTS CC Limited budget for new technology integration with complex legacy systems, strict regulatory compliance (GDPR, PCI DSS), need for real-time processing with low latency </div> </div>	<div style="display: flex; justify-content: space-between;"> <div></div> <div> 5. AVAILABLE SOLUTIONS AS Rule-based systems, manual review teams, basic fraud detection tools from payment gateways, chargeback insurance </div> </div> <div style="writing-mode: vertical-rl; font-size: 0.8em;">Explore AS, differentiate</div>
<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Focus on JBP, map into BC, understand RC</div> <div> 2. JOBS-TO-BE-DONE / PROBLEMS JBP Detect fraudulent transactions in real-time, minimize chargebacks and financial losses, protect customer data, Reduce false positives, ensure regulatory compliance, automate fraud detection processes </div> </div>	<div style="display: flex; justify-content: space-between;"> <div></div> <div> 9. PROBLEM ROOT CAUSE RC Increasing sophistication of fraudsters, large volume of transactions making manual review impossible, evolving fraud patterns, data silos preventing holistic view of user behavior </div> </div>	<div style="display: flex; justify-content: space-between;"> <div></div> <div> 7. BEHAVIOUR BE Customers currently rely on rule-based engines, manually review flagged transactions, constantly update rules, investigate chargebacks post-factum </div> </div> <div style="writing-mode: vertical-rl; font-size: 0.8em;">Focus on JBP, map into RC, understand RC</div>
<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Aligning TR & EM</div> <div> 3. TRIGGERS TR High volume of transactions, sudden spike in chargebacks, news about data breaches, regulatory audits, introduction of new payment methods. </div> </div>	<div style="display: flex; justify-content: space-between;"> <div></div> <div> 10. YOUR SOLUTION SL A scalable, real-time machine learning platform that analyzes vast amounts of transaction data, learns from new fraud patterns, provides high-accuracy alerts with explainable AI, and integrates seamlessly with existing payment infrastructure. </div> </div>	<div style="display: flex; justify-content: space-between;"> <div></div> <div> 8. CHANNELS of BEHAVIOUR CH 8.1 ONLINE: Payment gateways, fraud detection dashboards, data analysis platforms, API integrations. 8.2 OFFLINE: </div> </div> <div style="writing-mode: vertical-rl; font-size: 0.8em;">Enrich with A, with</div>
<div style="display: flex; justify-content: space-between;"> <div></div> <div> 4. EMOTIONS: BEFORE / AFTER EM </div> </div>		

References:

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