

Project Design Phase

Problem – Solution Fit Template

Date	15 February 2025
Team ID	LTVIP2026TMIDS73723
Project Name	Online payment fraud detection using machine learning
Maximum Marks	2 Marks

Problem – Solution Fit Template:

Problem-Solution fit canvas 2.0

Purpose / Vision

CS 1. CUSTOMER SEGMENTS <ul style="list-style-type: none"> Online banking users Credit/Debit card holders UPI users (PhonePe, Google Pay, Paytm) E-commerce customers Banks and financial institutions Payment gateway companies 	CS 2. CUSTOMER CONSTRAINTS <ul style="list-style-type: none"> Lack of awareness about fraud Weak passwords Sharing OTP details Limited technical knowledge Slow response from banks 	AS 5. AVAILABLE SOLUTIONS <ul style="list-style-type: none"> Manual transaction monitoring Rule-based fraud detection systems OTP verification systems Traditional banking alerts <p>Limitation: These systems cannot detect new fraud patterns effectively</p>
Q 2. JOBS-TO-BE-DONE / PROBLEMS <ul style="list-style-type: none"> Protect users from fraudulent transactions Detect suspicious activities in real-time Reduce financial losses Improve transaction security Build customer trust in digital payments 	E 4. JOBS-TO-BE-DONE / PROBLEMS <ul style="list-style-type: none"> Protect users from fraudulent transactions Detect suspicious activities in real-time Reduce financial losses Improve transaction security Build customer trust in digital payments 	BE 7. BEHAVIOUR <ul style="list-style-type: none"> Users prefer fast and secure transactions Banks monitor high-risk transactions Users immediately report suspicious activities Customers expect instant alerts
TR 3. TRIGGERS <ul style="list-style-type: none"> Sudden large transaction amount Multiple rapid transactions Login from unusual location / device Transactions at odd hours Transfer to unknown beneficiaries 	EM 5. EMOTIONS: BEFORE / AFTER <p>Before :</p> <ul style="list-style-type: none"> Fear of losing money Lack of trust in online payments Anxiety after suspicious transactions 	CH 8. CHANNELS & BEHAVIOUR <p>Online:</p> <ul style="list-style-type: none"> Mobile Banking Apps UPI Apps E-commerce Websites SMS & Email Alerts
TR 3. TRIGGERS <ul style="list-style-type: none"> Sudden large transaction amount Multiple rapid transactions Logins from unusual location/device Transactions at odd hours 	SL 10. YOUR SOLUTION <p>Develop a Machine Learning-based Fraud Detection System that:</p> <ul style="list-style-type: none"> Analyzes transaction patterns Uses ML algorithms (Logistic Regression/ Random Forest) Classifies transactions as Fraud or legitimate Provides real-time prediction Sends fraud alerts instantly Improves detection accuracy compared to traditional systems 	CH 8. CHANNELS & BEHAVIOUR <p>Online:</p> <ul style="list-style-type: none"> Mobile Banking Apps UPI Apps E-commerce Websites SMS & Email Alerts <p>Offline:</p> <ul style="list-style-type: none"> Bank branches / Customer care centers
EM 4. EMOTIONS: BEFORE / AFTER <ul style="list-style-type: none"> Fear of losing money Lack of trust in online payments Anxiety after suspicious transactions 		

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