

**Ideation Phase**  
**Define the Problem Statements**

<b>Date</b>	13 February 2026
<b>Team ID</b>	LTVIP2026TMIDS54062
<b>Project Name</b>	Online Payments Fraud Detection using Machine Learning

**Customer Problem Statement**

I am a digital banking customer  
I'm trying to make secure online payments without worrying about fraud  
But I often experience either fraudulent transactions or unnecessary transaction declines  
Because fraud detection systems are either not accurate enough or generate too many false alerts  
Which makes me feel anxious about my financial security and frustrated with online payment services

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**Problem Statement (PS)**

**PS-1:** I am a bank fraud analyst who wants to detect fraudulent online transactions in real-time, but I don't have an intelligent system that can accurately differentiate between genuine and fraudulent payment patterns.

**PS-2:** I am a financial institution manager trying to reduce fraud-related losses, but traditional rule-based systems fail to adapt to evolving fraud techniques and generate high false positive rates.

**PS-3:** I am a cybersecurity specialist aiming to strengthen digital payment security, but there is no integrated machine learning framework that continuously learns from transaction data and predicts emerging fraud patterns effectively.