

Project Summary: GPay Sentinel

GPay Sentinel is a next-generation Security Operations Center (SOC) dashboard designed to stop "coached" social engineering scams. Traditional fraud detection is blind to external factors, like a fraudster guiding a victim via a second phone or laptop. Sentinel bridges this gap by monitoring Behavioral Hesitation rather than just static account data.

The system utilizes a multi-model ensemble, featuring a custom XGBoost model, to establish a personal baseline for every user. When a user's transaction velocity slows to 1.5x their average, the system flags a "Danger" state. While raw ML models often struggle with the nuance of human behavior-evidenced by the challenge of refining early-stage data, I integrated Gemini 3 Flash as the ultimate reasoning engine.

Through Function Calling, the operator can "Initialize Audit" on any flagged transaction. Gemini 3 Flash analyzes the hesitation context and verbal cues to identify specific scam logic (e.g., Tech Support or Urgent Relative scams). The AI then briefs the operator via voice, explaining the threat in plain English and correcting misclassifications. By combining behavioral biometrics with Generative AI, GPay Sentinel moves the industry from simply detecting fraud to actively preventing it.