Project Title:

"Fraud Detection in Financial Transactions – AI-Powered Monitoring & Alert System"

Industry:

Finance / Banking

Target Users:

Banking Customers, Fraud Analysts, Compliance Officers, Risk Management Teams

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Problem Statement

Banks and financial institutions process **millions of transactions daily** through credit cards, online banking, and mobile wallets. However, detecting fraudulent transactions in real-time remains a major challenge:

- **Manual monitoring** is slow, inconsistent, and prone to errors.
- Fraudsters use **sophisticated patterns** (small, rapid transactions, location mismatches, unusual purchase behavior) that are hard to catch without automation.
- Customers often report **fraudulent transactions too late**, leading to financial losses and reputational damage.

To address this, the organization wants to implement a **Salesforce-based fraud detection system** that can:

- Capture and analyze transaction data in real-time
- Flag suspicious transactions based on configurable rules and risk scores
- Alert both customers and fraud analysts instantly
- Maintain case records for investigations and compliance reporting
- Provide dashboards for management to monitor fraud trends

PHASE 1 : PROBLEM UNDERSTANDING AND INDUSTRY ANALYSIS

Requirement Gathering :

- Create custom objects for storing transaction records (Transaction, Merchant, Customer Profile).
- Define fields (amount, location, merchant, device, risk score).
- Configure validation rules and workflow rules for anomaly detection.
- Set up Process Builder / Flow for fraud alerts & case creation.

- Use Einstein Discovery / AI for anomaly detection and fraud scoring.
- Enable Reports & Dashboards for fraud trend analysis.

Stakeholder Analysis

- Banking Customers → Receive real-time fraud alerts via Salesforce Email / SMS APIs (Twilio, Digital Engagement).
- Fraud Analysts → Investigate cases in Service Console with complete transaction details.
- Compliance Officers → Use Reports & Dashboards for AML/KYC compliance audits.
- Risk Managers → Monitor fraud trends & insights with Einstein Analytics.
- Salesforce Admins/Developers → Configure data model, automation, API integration, and AI models.

Business Process Mapping (Salesforce Flow)

1. **Transaction Capture**
    - Transactions are stored in the Transaction Object via API integration or manual upload.
2. **Fraud Detection**
    - Flows + Apex Triggers apply business rules (high-value, unusual frequency, overseas use).
    - Einstein AI assigns probability score for fraud risk.
3. **Fraud Alerts & Notifications**
    - Flow / Process Builder sends Email & SMS alerts to customers.
    - If unverified → escalated to Fraud Analyst.
4. **Case Creation**
    - Fraud cases auto-created in Service Cloud.
    - Assigned to Fraud Analyst queue.
5. **Case Investigation**
    - Analyst investigates via Service Console.
    - Case status updated: False Positive / Confirmed Fraud.
6. **Reporting**

    - Dashboards provide insights: fraud patterns, resolution timelines, and analyst workload.

Industry-Specific Use Case Analysis

- **Transaction Monitoring** → Real-time anomaly detection with custom objects + triggers.
- **Fraud Alerts** → Workflow + Email/SMS integration for instant customer communication.
- **Case Management** → Service Cloud lifecycle for tracking fraud investigations.
- **Risk Scoring** → Einstein AI assigns severity levels.
- **Analytics** → Dashboards for fraud volume, types, trends, and regulatory reporting.

AppExchange Exploration

- **Einstein Analytics Apps** → Pre-built dashboards for fraud detection.
- **Financial Services Cloud** → Banking-specific data model.
- **Security & Compliance Apps** → Data encryption & monitoring.
- **Twilio / SMS-Magic** → Customer notifications for fraud alerts.
- **Case Management Accelerators** → Extend fraud case lifecycle in Service Cloud.