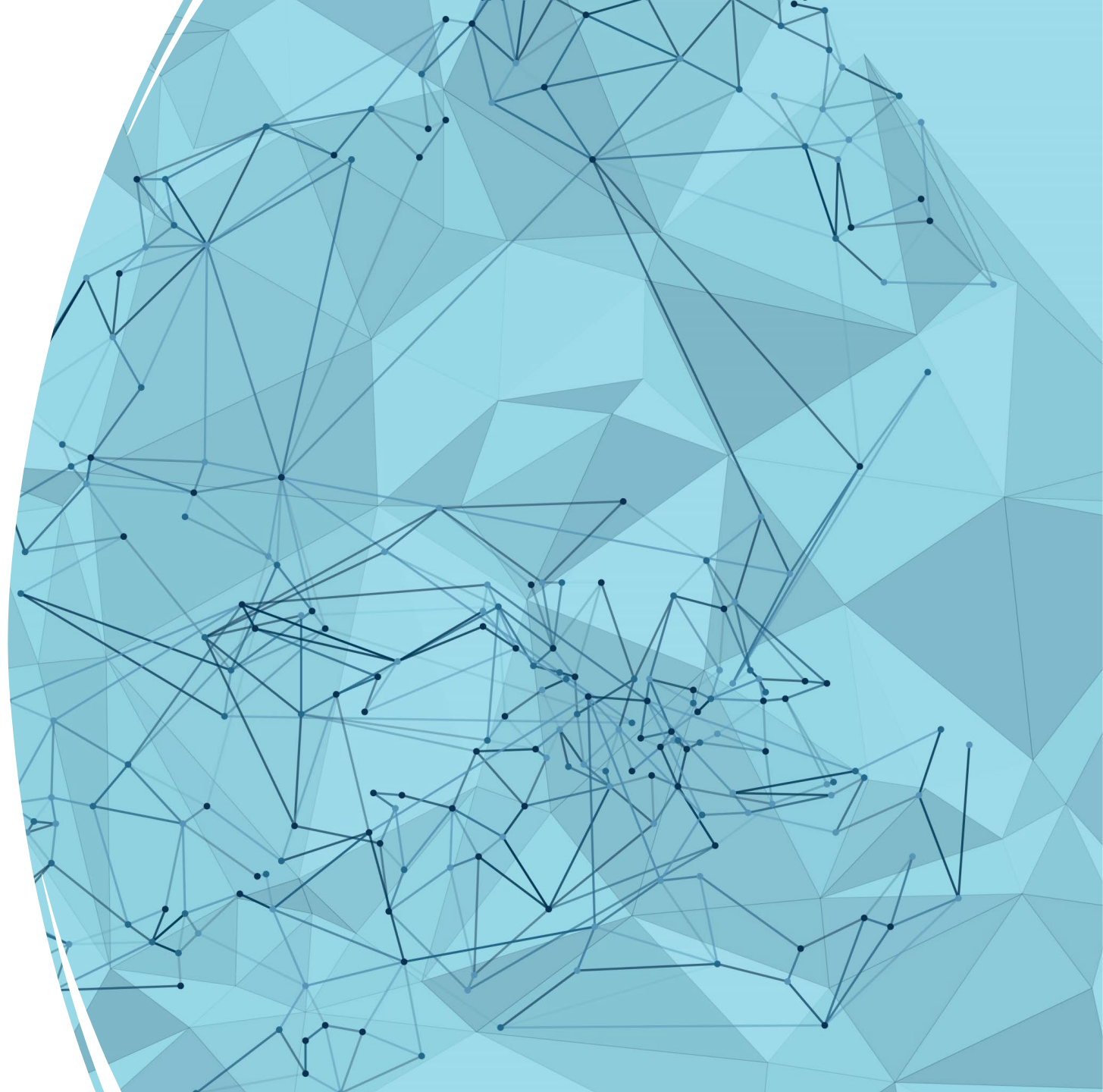# AI-Driven Fraud Detection and AML Compliance Platform

Salina Najera

Challenges and Strategic Objectives

Challenges:

- Increasing incidents of credit card fraud
- Stringent AML regulations

Strategic Objectives:

- Develop a solution for real-time fraud detection
- Stay ahead of compliance requirements

Technology Stack Overview

1. Data Ingestion with Apache NiFi

2. Seamless Data Flow into central processing system

3. Analytics and Anomaly Detection

4. Integration into Operational Flows

System Design & Data Flow

Advanced Analytics and Machine Learning

- Techniques:
  - ***Anomaly Detection Models***: Trained on historical transaction data to identify deviations from normal patterns that signify fraudulent behavior.
  - ***Predictive Analytics***: Forecast future fraud trends by analyzing past fraud cases and transaction behaviors.
- Algorithms:
  - Deep learning, decision trees, and clustering algorithms.

Real-Time Monitoring & Analytics Dashboard

- Capabilities:

    1. ***Instant Insights***: Displays real-time data on transactional activities, highlighting anomalies and potential fraud.

    2. ***AML Red Flags***: Identifies and alerts on AML red flags, such as unusual transaction patterns or links to suspicious accounts.

    3. ***Operational Response***: Integration with operational workflows for quick decision-making and action-taking based on detailed data visualizations.

Compliance & Reporting and Automation

. Key Functions:

1. ***Generate Compliance Reports Automatically***: Generates reports that meet current standards and regulations.

2. ***Update Reports as Regulations Change***: Dynamically adjusts report parameters to include new compliance data points and metrics.

3. ***Simplify Audits***: Consistently formatted and easily accessible data simplifies internal and external audits.
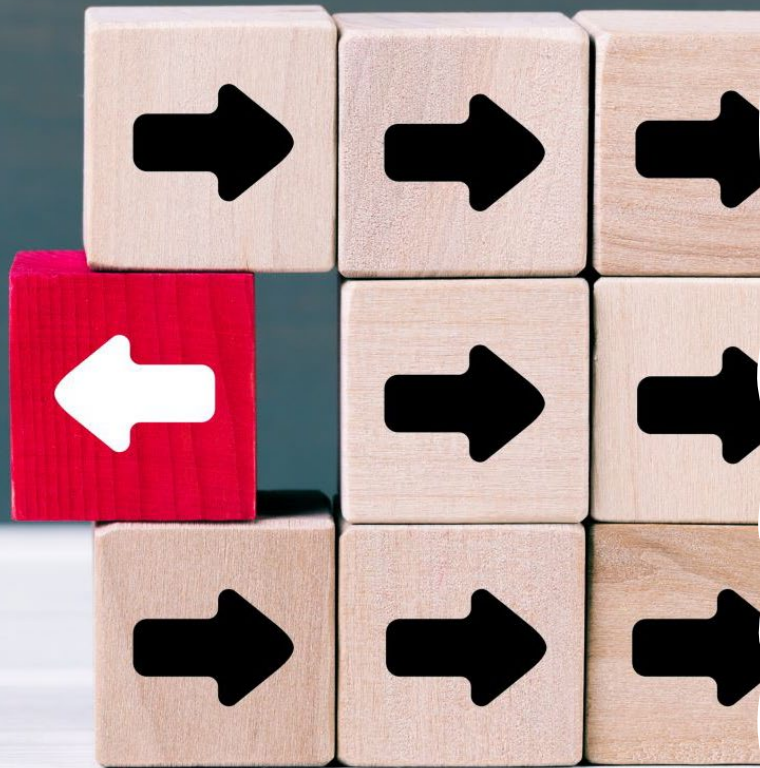
Implementation Strategy & Expected ROI

- Expected Returns:
  1. ***Reduced Fraud Losses***: Anticipate a significant reduction in fraud-related losses.
  2. ***Improved Compliance***: Expect a decrease in compliance-related issues and penalties.
  3. ***Enhanced Customer Satisfaction***: Strengthened security measures increase customer trust and satisfaction.

Next Steps

- *Engagement*

- *Feedback*

- *Endorsement to move forward*

THANK YOU