

PROJECT TYPE

AI integration for workflow automation

TECHNOLOGIES

Amazon MSK (Kafka), Amazon SageMaker, SageMaker Feature Store, Amazon API Gateway, AWS Lambda, Amazon ECS, PostgreSQL, Redis, React, TypeScript, Node.js, OpenTelemetry, Prometheus, Grafana

DURATION

16 weeks

METHODOLOGY

Scrum

TEAM

- 1 Solution Architect
- 1 Business Analyst/Product Owner
- 2 Backend Engineers
- 1 Data Engineer
- 1 ML Engineer
- 1 QA Engineer

AI Integration for Fraud Detection and Underwriting Automation

A compliant AI decisioning solution that brings real-time fraud and underwriting scoring into a governed approve/review/decline workflow, with full auditability, sensitive-data guardrails, and a direct line into existing analytics.

Project background

The Client was growing fast and needed to process a higher volume of loan applications without scaling manual review at the same rate. They already used several external and internal data sources, but those inputs were not connected into one decision flow and could not support reliable AI-based automation.

Project Distinctive Features

The project focused on AI integration into a live financial workflow rather than on model development in isolation. SumatoSoft connected risk feeds, application data, AI scoring, decision routing, and manual review into one controlled process with audit trail, reason codes, and monitoring.

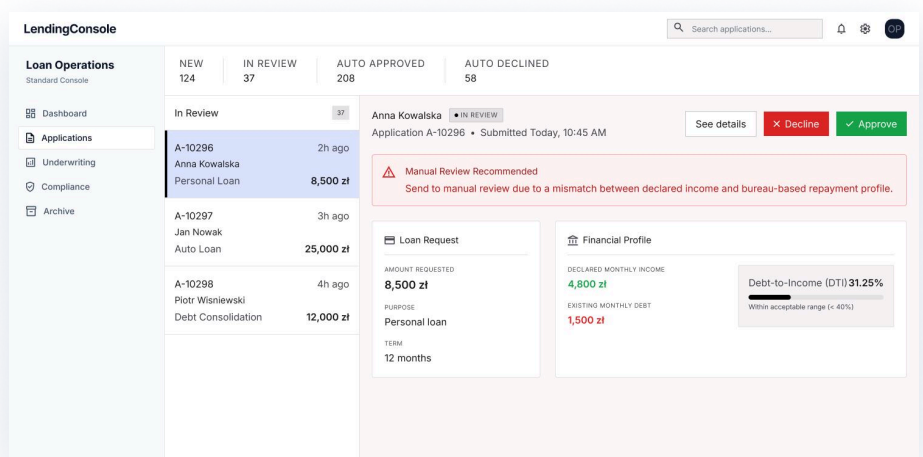


Business challenge

The Client wanted to reduce manual review, speed up decision-making, and improve risk control in the loan application flow. They needed AI to work inside existing business operations, with their defined decision logic, traceable outputs, and safe handling of sensitive financial data.

Our solution

SumatoSoft built an integration layer around the Client's application flow and connected external risk sources, transaction signals, and internal customer data into an event-driven scoring pipeline. We implemented an online feature store, integrated fraud scoring and underwriting scoring services, and built a decision engine with approve, review, and decline paths. We also delivered a manual review workspace with key signals and reason codes, added audit trail and monitoring, and set up feedback capture for later model improvement.



Customer's benefits

The Client got a faster and more consistent decision flow with less operational pressure on analysts. On the pilot stream, the share of applications sent to manual review dropped from 44% to 27%, while decision time on 95% of applications decreased from 92 seconds to 14 seconds. Risk teams gained a single process with visible signals, explainable outputs, and better control over fraud and underwriting decisions.

What's happening with the project right now?

The solution is in active use on a selected lending product. The Client is expanding it to additional loan flows, tuning thresholds, and improving model quality based on production outcomes.