

# Nripesh Pradhan

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## Summary

Engineering leader with 7+ years building production ML systems, services, and data platforms across risk, fraud, and compliance. Built an entire compliance and fraud stack from scratch for a 10M+ user fintech across 7+ markets, replacing vendors with in-house systems that saved \$500K+/year.

## Experience

### Head of Risk Intelligence & Automations, Chipper Cash

Oct 2025 – Present

*Own fraud, compliance, and risk data systems across 7+ markets. Report to Chief Compliance Officer.*

- Led the **Fraud & Compliance Roadmap**, an AI-first strategy to replace third-party vendors with in-house systems, saving \$500K+/year and reducing alert-to-resolution time by over 80%
- Built a full-stack compliance case management system from scratch, replacing a paid vendor. Designed data model, API layer, and front end serving 8 currencies with SAR/STR e-filing (FinCEN, goAML), role-based access, and audit trails
- Designed end-to-end transaction monitoring pipeline processing 2,000+ alerts across 20 configurable rules in under 5 minutes (Python + dbt + Snowflake). Authored all 15+ TM rules deployed across global markets
- Shipped **AI-powered watchlist screening tool** using dual-model architecture for entity extraction and match decisioning, achieving 85% accuracy and 95% recall. Migrated from legacy SOAP vendor to self-hosted OpenSanctions with custom PEP datasets
- Built automated fraud alert pipeline that ingests partner emails via Gmail API, extracts data with LLM, resolves identity through Snowflake, and executes account locks and fund liens. Cut processing from 30 min/email to under 20 seconds, running 24/7

### Tech Lead, Risk & Growth, Chipper Cash

Jan 2022 – Oct 2025

*Promoted to Staff. Designed and shipped ML-powered fraud detection systems and production services.*

- Designed and deployed merchant parsing service, a Flask API that categorizes card transactions via LLM-powered extraction, returning merchant name, category, and logo in under 1s per request
- Architected **User Onboarding Score**, an ML model that quantifies fraud probability for new users using IP, timing, and identity signals. Blocked 6,000+ fraudulent referrals/day and drove offboarding of 19,000+ fraud accounts, saving \$1.4M+/year in vendor costs
- Reduced account takeover incidents from 30+/day to under 10/quarter by designing selfie-based step-up authentication and device blocklisting globally
- Built real-time transaction scoring service (Flask) for card deposit fraud with velocity and rolling-average features at under 5s latency, serving production traffic across US corridors
- Built automated chargeback decline pipeline that identifies qualified disputes, generates proof-of-delivery evidence, and submits responses via payment processor API to recover disputed funds

### Senior Data Scientist, Chipper Cash

Feb 2021 – Jan 2022

*Core financial data infrastructure, growth analytics, and fraud analysis.*

- Led company-wide dbt adoption and designed the core financial data models (expanded transfers, expanded ledgers) powering all analytics, dashboards, and internal tools. Trained 15+ developers, established SQL standards and peer review
- Drove fraud and risk investigations that directly shaped policy: surfaced referral abuse patterns during a 50K/day user surge, analyzed chargeback fraud typologies, and identified ACH return rates above regulatory thresholds, leading to new fraud controls
- Shipped self-service campaign launch tool enabling marketing launches reaching 900K+ users. Built production alerting system monitoring transaction failure rates across all payment providers

### Senior Consultant, Data Science, Logic (acquired by Accenture)

Oct 2018 – Feb 2021

*Client-facing data science consulting for Fortune 500 retail.*

- Delivered predictive analytics solutions for Fortune 500 retail clients including **Best Buy** and **Kendra Scott**. Led end-to-end engagements from discovery through deployment, presenting recommendations on demand forecasting, inventory optimization, and pricing to senior merchandising leadership

## Technical Skills

**Languages:** Python, SQL, TypeScript **Data:** dbt, Snowflake, PostgreSQL, Airflow **ML/AI:** CatBoost, LLMs, NLP **Infrastructure:** Docker, GCP, AWS, Flask

**Graph/Vector:** Neo4j, Pinecone **Compliance:** Sardine, OpenSanctions **Tools:** Retool, Datadog, OpenAI API

## Education

**Grinnell College**, Grinnell, IA

May 2018

B.A. Mathematics and Statistics | Budapest Semesters in Mathematics | HBX CORE, Harvard Business School