

# David Marshall

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## About Me

Accomplished Staff Engineer with a proven track record in designing and executing scalable backend systems and robust risk management solutions. Extensive background in payments, order processing, and fraud detection. Thrives in team settings, driving initiatives that deliver significant business value.

## Education

**University of Pittsburgh** - Mathematics and Computer Science

## Professional Experience

### Above Lending

**Role:** Staff Engineer

**Timeframe:** September 2023 - current

**Teams:** Originations Product, Servicing Product, Quality Engineering

- Augmented system observability via distributed tracing, automated Slack alerts for feature flag alterations, and established a comprehensive pre-launch protocol for major features
- Eliminated CI/CD bottlenecks concerning image runner size and test concurrency, and standardized end-to-end and integration testing methodologies across the engineering division
- Consolidated six Node.js microservices into two Ruby on Rails domain applications, streamlining architecture, enhancing developer efficiency, and boosting runtime performance
- Transitioned from proprietary ruby gems to standardized Faraday clients and middleware for service calls, simplifying CI/CD processes and enabling Dependabot integration

### Chime Financial

**Role:** Staff Engineer - Risk and Identity

**Timeframe:** April 2020 - August 2023

**Teams:** AuthN Product, Risk Platform, Graph Databases, Profiles Product

- Served as Technical Product Manager for the AuthN team, prioritizing production issue resolution and strategic roadmap development
- Designed and spearheaded a no-code Risk Policy GUI and its supporting distributed platform, orchestrating a phased two-year implementation strategy for a 10-engineer team
- Applied expert knowledge in risk and identity to architect a comprehensive decision-360 graph database
- Led recruitment and technical interviewing, expanding the Chicago office engineering team from 2 to 24 members
- Pioneered a microservices framework for risk evaluation, optimizing system scalability and throughput
- Developed crucial API endpoints for integrating risk data, facilitating regulatory compliance and user experience enhancements across departments
- Innovated a sidecar model for dynamic risk rule evaluation, ensuring high availability across diverse service architectures

### Groupon

**Role:** Senior Engineer

**Timeframe:** February 2015 - July 2019

**Teams:** Payments Risk, Merchant Payments, Profiles

- Collaborated closely with the Risk Operations team to align technical strategies with business objectives
- Took the helm as architect and lead developer for a sophisticated manual review system targeting high-risk transactions
- Created and delivered a targeted project management curriculum to elevate engineering team skills
- Streamlined data and service integration post-LivingSocial acquisition, optimizing system performance and cost efficiency
- Instituted rigorous troubleshooting protocols for merchant payment issues and NetSuite ERP system integration

- Engineered a real-time risk analytics framework, securing millions of transactions
- Championed enhanced engineering methodologies and best practices within the company, focusing on risk-aware product development

## **LendingHome**

**Role:** Core Engineer

**Timeframe:** August 2014 - January 2015

**Teams:** Originations Product

- Integrated cutting-edge APIs for banking transaction analysis to refine borrower risk assessment
- Orchestrated seamless integration of external risk evaluation tools, bolstering KYC/AML processes and operational efficiency
- Led the design and implementation of an intuitive onboarding UI, accelerating the lending cycle and improving client conversion rates

## **Groupon**

**Role:** Software Engineer

**Timeframe:** December 2012 - August 2014

**Teams:** Payments Risk

- Pioneered the Payments Risk team, setting the foundation for its engineering culture and processes
- Assessed and incorporated third-party solutions to bolster fraud detection capabilities
- Managed the seamless migration of fraud detection infrastructures between data centers without service interruptions
- Authored an internal guideline for relocating Redis stores between data centers, ensuring zero downtime

## **ModCloth**

**Role:** Associate Software Engineer

**Timeframe:** October 2011 - December 2012

**Teams:** Business Intelligence, E-commerce Product

- Engineered a dynamic product recommendation engine leveraging seasonal inventory data
- Architected a fraud monitoring system to flag and review suspicious transactions
- Collaborated with data analysts to streamline ETL processes for enhanced data warehousing and analytics
- Contributed to API service development and maintenance, focusing on e-commerce and risk management solutions

## **Skills**

- Distributed System Design and Architecture
- Project Management
- KYC/AML Compliance
- Graph Databases
- Risk and Identity
- Trust and Safety
- Fullstack Engineering
- Ruby on Rails
- Technical Roadmap Planning