

ERIC LU

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Experience

Adobe

May 2023 – Present

Software Engineer: Risk Platform & Fraud Prevention

San Francisco, CA

- Revamped Adobe's Risk SDK using browser caching, CDN distribution, and geo-resiliency to enable collection of user & browser signals, bot detection, IP intelligence, and 3rd-party integrations across **100M+ *.adobe.com** sessions weekly
- Engineered high-throughput DAG ETL pipelines (Redis, Airflow, Databricks Spark, Kafka) to collect, process, and classify fraud signals across email domains, payments, and account attributes on a data lake for real-time serving.
- Built Gardener: scheduled cloud agents (Jenkins, Claude) for continuous codebase health improvements. Fixed security vulnerabilities, memory leaks, thread safety issues across many codebases in Adobe ecosystem
- Developed back-end fraud vendor integrations, abuse detection, integrity, & risk decisioning: design decisions for parallelism, resiliency, caching, etc. Directly resulted in **400+% fraudulent payment reduction** and **\$XXM ARR**

Software Engineer: Payments & Order Processing Services

- **Commerce AI agent**: Built **org-wide hackathon-winning** agent utilizing RAG (LangChain), memory, and tool-calling for E2E checkout, product discovery, upsell, and PayPal-integration through natural language chat interface
- Designed and built eCommerce platform features: Pause/Resume contract scheduling (\$XXM ARR), daily/weekly App Store subscriptions (\$XXM ARR), undo cancellation (\$XXM ARR), free offer promotion bundling (\$XM ARR)
- Led migration to Ethos Flex: GitOps-based Kubernetes-native CI/CD pipeline (Argo) with progressive canary rollouts, automated rollback, and observability/monitoring; deployment velocity increased $\geq 2x$, maintained 4 9's availability
- Led Commerce MCP project: Unified interface for AI-assisted support, log analysis, CSO remediation, and observability

Software Engineer Intern: Payments

- Designed and tested multiple ML classification models (Neural nets, XGBoost) using Spark Tensorflow and Elephas to drive retry cost reduction and reduce model latency by 50% using distribution at scale through PySpark RDDs
- Built end-to-end data mining processes on payment data to optimize retry schedule with 42 recommendations

Valley Consulting Group (UC Berkeley)

2021 – 2023

Project Lead / Consultant / Internal VP roles

Berkeley, CA

- **Project Lead (Starbucks)**: Managed delivery of emerging tech strategy (Web3/AR/VR) for Odyssey. Developed KPI-frameworks to evaluate partners and identified internal operational gains (employee training/advertising)
- **Technical Consultant (Roku)**: Led a data science initiative to drive Roku Voice retention. Leveraged Random Forests, PCA, and K-Means segmentation on XM+ users to identify super-users and optimize product bundling strategies.
- **Consultant (Airbnb)**: scraped competitor platforms, UI/UX research, increased accessibility of user data management

U.S. Venture (Breakthrough)

May 2022 – August 2022

Data Engineer Intern

Green Bay, WI

- Deployed E2E geospatial index for pricing methodology to reduce query operations to NoSQL (GeoJSON) DB by 40%

Education

University of California, Berkeley

B.A. Computer Science, B.A. Data Science, Concentration in Business/Industrial Analytics

GPA: 3.7

Database Systems · Computer Security · Algorithms Analysis · Operating Systems · Machine Learning · Discrete Math · Data Structures · Data Science Principles · Artificial Intelligence · Natural Language Processing · Information Systems

Projects

Tow-Away Alerts | TypeScript, React, Firebase Functions, Firestore, Firebase Hosting, Mapbox, Resend | GitHub 2026

- Built an SF parking alert service: daily scheduled job polls city permit data (DataSF sftu-nd43), normalizes and upserts records into Firestore, and triggers email alerts when new tow-away zones are posted near a user's parked car location
- Designed a geospatial matching engine using geohash indexing for curb-segment proximity lookups, with confidence scoring (same block face vs. nearby corridor) and deduplication to prevent repeat alerts for the same permit

Technical Skills and Interests

Languages: Python, Java, JavaScript/TypeScript, C, HTML/CSS, SQL, GraphQL

Frameworks/Tools: Spring Boot, Node.js, Flask, React, Apache Kafka, Google ADK, LangChain, MCP, RAG, A2A, Redis, Lambda, S3, DynamoDB, SQS, Jupyter, TensorFlow, NumPy, Pandas, Scikit-learn, CloudFront, Kubernetes, ArgoCD, Argo Workflows, Docker, Jenkins, Prometheus, Grafana, Splunk, NewRelic

Interests: Golf, Travel, Surfing, Stock Investing, Cooking, Baseball, Poker, Snowboarding, Behavioral Economic Podcasts