

Alexander Liu

aliksliu@gmail.com | alexanderzliu.github.io | linkedin.com/in/alexanderzliu

Skills

Languages: Python, SQL

Frameworks & Libraries: LangChain/Graph, MLflow, pandas, Flask

Platform & Ops: Databricks, Airflow, dbt, Snowflake, Git, AWS Bedrock/EC2, Azure OpenAI

Experience

AI Solutions Engineer

Oct 2025 – Present

Penguin Random House

San Francisco, CA (Remote)

- Developed an automated LLM-enabled piracy detection and takedown pipeline to combat copyright infringement of audiobooks on YouTube representing \$8M+ in lost revenue opportunity.
- Unlocked a \$21M incremental revenue opportunity in lifting Amazon PDP conversion rate 1.5% by building a GenAI A+ asset generator and review interface that outputs 20k+ on-brand quote cards and banners daily.
- Engineered a RAG-powered marketing agent that monitors real-time web trends, maps them to relevant catalog titles, and autonomously generates campaign themes and copy for consumer marketing teams.
- Built a metadata enrichment agent for 50k+ authors, leveraging custom MCP servers to reconcile internal data, reducing token costs by 86x while achieving >95% eval accuracy.

Jr. Machine Learning Scientist

Apr 2024 – Oct 2025

Penguin Random House

San Francisco, CA (Remote)

- Improved annual demand forecast error by up to 39% on 40k+ titles weekly by fine-tuning pretrained transformer-based time series models (Chronos) that are validated via historical backtests.
- Led production deployment of a new-title pricing pipeline for over 2,400 books per year by orchestrating Databricks training and inference jobs using Airflow with automated data-drift detection and alerting.
- Trained 17 developers on Claude Code through working sessions, office hours, and knowledge shares while maintaining repo of documentation and custom commands to automate common data science workflows.

Project Management Analyst

Oct 2021 – Apr 2024

Penguin Random House

San Francisco, CA (Remote)

- Led a 40-member cross-functional GenAI program, defining execution and risk-mitigation strategies to drive an automation-focused project portfolio across the organization.
- Directed use case experiments for flap copy generation, metadata optimization, and predictive title commissioning, leveraging market analytics to streamline acquisition and production workflows.
- Scouted the AI startup landscape to source vendor demos and facilitated cross-departmental knowledge exchanges (Legal, InfoSec, Editorial) to align stakeholders on emerging opportunities and compliance risks.

Projects

Agentic Interactive Fiction

- Engineered a stateful multi-agent roleplaying system using LangGraph and PostgreSQL (pgvector), implementing middleware and RAG for persistent narrative context across user interactions.
- LLM extraction pipeline converts long-form texts into structured personas and world artifacts, integrating MLFlow for tracing and evaluation to optimize agent fidelity.

Education

U.C. Berkeley – B.A. in Computer Science

Aug 2021