JONATHAN WESTERFIELD

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PROFESSIONAL SUMMARY

Backend and Platform Engineer with **5+ years** at Amazon building **Java/Spring services**, **asynchronous APIs**, **CI/CD release validation**, **CloudWatch observability**, and **AI compute infrastructure**. Since 07/2025, on a planned career break, independently building Librarian, a local-first open-source retrieval platform, while pursuing full-time backend and infrastructure roles.

TECHNICAL SKILLS

Languages	Python, Java, Lua, TypeScript
Backend & Platform	Java/Spring, FastAPI, Docker, SQLite, AWS CloudWatch, CI/CD, Asynchronous APIs, API Contracts
Retrieval	RAG, Local LLM Workflows
Frontend Project Work	React, TypeScript, Vite, Vitest

WORK EXPERIENCE

Amazon — Annapurna Labs 12/2022 – 07/2025
Software Development Engineer II — Machine Learning Acceleration Systems *Austin, TX*

- Reduced production failures by **40%** and manual deployment effort by **over 70%** by building a **CI/CD pipeline** for **pre-production validation** across multiple **server generations**, automating **regression testing** and **release packaging**.
- Unblocked **debugging workflows** across **8+ engineering teams** by integrating **AWS CloudWatch telemetry** into **fleet-wide testing infrastructure**, reducing cross-organizational investigation time-to-resolution by **over 90%**.
- Designed and owned a **Lua/POSIX-based asynchronous CoAP API framework** with **100+ config-driven endpoints**, improving **test development** speed by **30%** and **hardware diagnostic** speed by **over 55%**.
- Reduced **Trainium** unsellable rates by **over 75%** by developing **cross-platform, cross-architecture Lua libraries** to exercise and test components in **fleet hardware** (**PCIe, HBM, BMC, and Ethernet**) during **EC2 provisioning**.
- Resolved known **dirty-reboot tickets** and reduced repeat investigation time by **25%** by extending an internal **Python diagnostic tool** with **fleet failure fingerprints**.

Amazon — Amazon Advertising 05/2021 – 12/2022
Software Development Engineer — Amazon Ad Exchange (AAX) *Austin, TX*

- Built and evolved **Java/Spring microservices** for Amazon Advertising **auction-pricing systems**, defining backward-compatible **API contracts** and safely delivering **production changes** for partner teams.
- Implemented **Java-based auction ad deduplication** capabilities for a new **pricing flow**, protecting advertiser budgets, enabling adoption by partner teams, and safeguarding **over $70MM** in Amazon Retail revenue.
- Accelerated development and **production testing** for new pricing mechanics by **over 85%** by leading cross-team design of **Java/Spring-based auction experimentation controls**, enabling page & placement-level **A/B testing**.
- Reduced team support burden by **over 40%** by creating **self-service onboarding**, **debugging**, and **change-management processes** along with corresponding documentation and **runbooks** for internal and partner teams.

Amazon Web Services 06/2020 – 05/2021
Software Development Engineer — AWS Directory Service *Seattle, WA*

- Remediated a critical **security vulnerability** by migrating **7+ code packages** to dedicated **pre-production aliases**, improving **deployment isolation** and **release safety**.
- Led **Python 3 migration** of the primary **canary monitoring system**, creating a **repeatable upgrade path** for future service migrations.

INDEPENDENT ENGINEERING

Librarian — Open-Source Retrieval Platform 07/2025 – Present
Independent Software Engineer *Remote | GitHub*

- Built a **local-first RAG platform** using **FastAPI**, **Docker**, **SQLite**, and **local LLMs** to ask queries about long-form ebook files and get answers as if speaking to a librarian.
- Implemented an **idempotent document ingestion worker** with **file hashing**, **metadata extraction**, **EPUB parsing**, and **error isolation** for inconsistent book file structures.

EDUCATION

Texas A&M University: B.S. Computer Engineering *08/2015 – 12/2019*