Brian Pak

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Work Experience

Ridgeline Reno, NV

Software Engineer II July 2025 - Present

- Accelerated bulk uploads for a CSV ingestion service, increasing average throughput from **~42 to 1250** records/second by leading a full backend & frontend refactor using **Spring Boot**, **React**, and **PostgreSQL**.
- Prototyped an in-house API integration testing framework with **Claude Code** and **Testcontainers**, enabling rapid validation of user flows across **300+** tests in 4 microservices to reduce regression risk.
- Reduced GitHub CI/CD pipeline runtimes by **~9 minutes** through a **Python** script using GitHub APIs that dynamically rebalanced test shards from historical runtime data, advancing developer feedback loops.
- Owned end-to-end design and implementation for **React** client and backend infrastructure to enable custom fields backed by **Spring Boot**, unblocking onboarding and securing 3 major customer deals.

Software Engineer I July 2024 - July 2025

- Reduced transactions page load time from **16s** to **3s** by designing and implementing a server-driven UI table architecture in collaboration with two engineers using **Typescript**, React, and **Exposed** (PostgreSQL).
- Designed a centralized accounting validations architecture with **JacksonXML** and Spring Boot, adopted by 2 product teams to ensure consistency in validating accounting transactions.
- Engineered a **Kotlin** adapter layer to integrate a C-based bond calculator across market data and ledger services, providing 2 product teams with reliable, real-time financial calculations**.**

Software Engineer Intern Jun 2023 - Aug 2023

- Shipped a low-latency trade alert notification system with Python, **GraphQL**, **AWS RDS**, and **Amazon S3** to manage and execute real-time trading alerts for over 200 traders nationwide
- Orchestrated CI/CD pipelines and comprehensive component tests in TypeScript and **Cypress**, maintaining **85%** test coverage in trading flows.

GT Center for Music Technology Atlanta, GA

Software Developer Jan 2023 - May 2024

- Reduced end-to-end audio latency from **900 ms** to **<150 ms** by introducing a browser-based audio scheduling system leveraging the **Typescript Web Audio API** to orchestrate AudioBufferSourceNode playback.
- Partnered with machine learning researchers to prototype AI-driven suggestions for user-defined audio tracks, using **Redis** and **Flask** to accelerate iteration and enhance the user's creative workflow.
- Upgraded an AI-centric digital audio workspace from a deprecated Vue codebase to a modern React, TypeScript, **Tanstack Query**, and **Chakra UI** stack.

Projects

Rocola (Jukebox)

- Directed a team of 4 developers to design & launch a serverless real-time music session application with **SST**, **NextJs**, **Radix UI**, and a **Node** server deployed to AWS.
- Implemented real-time updates to the playback queue managed **Websockets**, **AWS API Gateway**, and TanStack Query, streaming updates to queued songs stored in **DynamoDB**.

Education

Georgia Institute of Technology May 2024

Bachelor of Science in Computer Science Atlanta, GA

Skills

Languages: Typescript, Python, Kotlin, Java, SQL
Frameworks: React, Spring Boot, Exposed, Node, NextJS, Tailwind, JUnit, Cypress
Developer Tools: Git, AWS, PostgreSQL, Docker, Claude Code, Jira