

# JACOB MACFARLANE. Software Engineer

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## Professional Summary

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Backend and Full Stack Software Engineer with proven experience architecting **scalable, test-driven Rails applications and secure APIs** within distributed systems. Skilled in building **developer tooling and workflow automation**, with a track record of **end-to-end feature ownership from design to deployment**. Passionate about crafting **robust backend services that improve developer productivity and security posture** across platforms.

## Skills

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**Languages & Frameworks:** Ruby on Rails, PostgreSQL, JavaScript (ES6), TypeScript, React, Next.js, Python (FastAPI, Django), HTML5, CSS3, WebSockets, Cypress

**Systems & Practices:** Test-Driven Development, CI/CD (GitHub Actions), API design (REST, OpenAPI), JWT Authentication, Redis, GCP (Cloud Run, Functions, Workflows, Endpoints), Agile Methodology, Object-Oriented Programming, Security Automation

**Additional:** Embedding Pipelines, Vector Similarity Search, Modular Architecture, Automated Testing Pipelines

## PROFESSIONAL EXPERIENCE

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### Full Stack Software Engineer

**Auddia (Remote)** | Aug 2023 – present

- **Architected Rails-backed APIs** with structured, documented endpoints for audio and podcast management, implementing secure JWT authentication and scalable PostgreSQL-backed storage for content and user state management.
- **Led CI/CD pipeline creation with GitHub Actions**, enabling automated, reliable deployments and test pipelines (Cypress, integration tests), reducing manual release processes.
- **Designed and implemented scalable ingestion workflows** using Cloud Functions and Cloud Run, reducing manual backend updates by 80%, while ensuring stability under production traffic.
- Developed **AI-powered services** (TensorFlow + Rails PGSearch) enabling personalized content discovery and recommendations, demonstrating experience integrating advanced pipelines within production Rails environments.
- Authored **OpenAPI specifications**, improving cross-team collaboration and API consistency, aligning with test-driven development practices.
- Integrated Redis caching for backend services to improve performance and reduce repeated computation under high-load scenarios.
- Collaborated asynchronously across a distributed team, demonstrating self-management and clear, effective communication while delivering production-grade features.

## EDUCATION:

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**Turing School of Software and Design**, Denver, CO

January 2023 - August 2023

Accredited Frontend Software Engineering Certificate

- Built 10+ web applications in collaborative environments of 2 - 4 people utilizing Agile practices
- Received 1700+ hours of technical instruction, independent and group project work, and job-readiness courses/exercises

