

Alexander Root-Roatch

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Portfolio: <https://arootroatch.dev> | <https://linkedin.com/in/arootroatch> | <https://github.com/arootroatch>

Summary

Background in audio engineering — comfortable with complex systems and high-pressure environments. Test-driven developer grounded in SOLID principles; pragmatic over dogmatic. Strongest when mentoring teammates, driving architecture, and shipping products that have real-world impact.

Technical Skills

- **Languages:** Clojure, ClojureScript, Java, JavaScript, TypeScript, Python
- **Frontend:** React, Next.js, Reagent, Redux, Framer Motion, Tailwind CSS, CSS Modules
- **Backend & Data:** PostgreSQL, Datomic, MongoDB, Redis, GraphQL, REST, WebSockets, Pub/Sub
- **Infrastructure:** AWS (EC2, EKS, S3, DynamoDB, IAM), Docker, Kubernetes, GitHub Actions CI/CD
- **Testing:** Speclj, JUnit, Vitest, Playwright, JSDOM, RSpec
- **Practices:** TDD/BDD, Agile, Pair Programming, Agent Development

Work Experience

Senior Software Engineer – Clean Coders, LLC (Remote) Nov 2024 – Present

- Led technical delivery of Odyssey, an online education platform — served as primary client contact, extracted acceptance criteria from ambiguous requirements, and drove architecture decisions for database schema and component design
- Onboarded developers to a complex codebase through pairing sessions and architectural walkthroughs, accelerating their time to first contribution
- Authored and presented a release management proposal covering branching strategy, versioning, and dependency management for a multi-team client product
- Unblocked a stalled team by authoring a 40-test e2e suite that surfaced hard-to-reproduce bugs in a local-first PWA
- Co-authored ReMemory, a state-management addition to the open-source C3kit Bucket library that increased front-end performance 6x by preventing unnecessary component recalculation — <https://github.com/cleancoders/c3kit-bucket>
- Delivered a production-ready mobile commerce retail delivery backend in Clojure in 3 weeks with full test coverage
- Isolated staging from production by provisioning a dedicated AWS environment (EC2, IAM, DynamoDB, S3), reducing deployment risk

Software Apprentice – Clean Coders, LLC (Remote) May 2024 – Nov 2024

- Promoted to Senior Software Engineer
- Completed a rigorous apprenticeship program in 6 months, covering SOLID principles, TDD, design patterns, clean architecture, data structures, Agile, and estimating

Owner / Web Developer – Sound Roots Productions (Nashville, TN) June 2019 – Feb 2025

Owned and operated a live-event production company providing audio and lighting technical staff to venues and nightclubs.

- Built and maintained web applications that managed job applications and feedback for 4 venues across 3 cities
- Developed 3 VBA automations for payroll and invoicing that saved ~\$2,000/year in labor and software costs

Audio Quality Control Technician – VER/PRG (Nashville, TN) Nov 2017 – Jun 2019

- Configured redundant Dante audio-over-ethernet and fiber-optic networks, wireless access points, and production LANs for large-scale live events.
- Progressed from entry-level to go-to resource for system prep and troubleshooting within the first year.

Projects

Gift Exchange Generator (JavaScript, MongoDB, Zod, Serverless, Vitest, Playwright) Jan 2022 – Present

<https://giftexchangegenerator.netlify.app/> — <https://github.com/arootroatch/ChristmasGiftExchange>

- Grew to 46,000+ organic users; redesigned the MongoDB schema in 2026 to eliminate data duplication and unlock features like reusable exchanges and wish-list sharing — driven by real user feedback
- Chose a vanilla JS event-driven architecture to keep the bundle lightweight and search-engine crawlable, driving organic growth without paid acquisition

Education

University of Wisconsin Oshkosh 2017

- Bachelor of Music — Recording Technology
- Bachelor of Arts — Spanish Language and Literature (studied abroad at University of Salamanca, Spain)