

ROBERT FAIRLEY

Creative Technologist · Systems Architect · Music & Audio Production

Hamilton, Ontario, Canada

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<https://robertfairley.com> · <https://github.com/robert-fairley>

Profile

Creative technologist with 10+ years building reliable interactive systems at the intersection of software, audio, and experiential design. Combining rigorous systems design with hands-on fabrication experience and deep mastery of audio/music technology and practice. Driven by a naturally inquisitive approach to life and work, a love of seeing ideas take form, and a fervent need to create. I specialize in transforming ambitious creative visions into reliable, scalable realities.

Selected Projects & Creative Work

Burns Recording Company · Independent Music Label & Audio R&D

2020–Present

<https://burns.fm>

Complete creative and technical pipeline for music production and distribution: 5 album releases (digital + physical media), home studio recording and engineering, professional cassette duplication coordination, and custom software tooling for audio workflows.

- * Recipient of **FACTOR Artist Development Grant** (2022) for The Old Ways EP
- * Full production pipeline: composition → recording → mixing → mastering → physical media manufacturing
- * Live performance background (guitar, bass, vocals)

Astarte · iOS DAW Controller

<https://astarte.burns.fm>

Custom-built wireless MIDI controller (MCU protocol over WiFi) for digital audio workstation control. Designed to fill a form-factor gap in mobile DAW control interfaces. Built with Swift, deployed to App Store, actively used in personal studio workflow.

PL-10 • Self-Hosted Audio Streaming Platform

<https://pl-10.burns.fm> | <https://github.com/burns-fm/pl-10>

Open-source audio streaming starter kit for musicians and tinkerers. Node.js/TypeScript backend with retro-styled web interface, embedded audio player, and oscilloscope visualization using Web Audio API. Minimal, self-hostable alternative to commercial streaming platforms.

A Bit Pitchy • Interactive Pitch Training Game

<https://abitpitchy.com>

Web-based ear training tool using Web Audio API for real-time audio playback and user interaction. Players guess pitches, track progress, and export performance data for analysis. Supports multiple MIDI instrument voices. Vanilla TypeScript UI, no backend processing required.

Technical Experience

Software Developer • Lleu Labs Inc. • Hamilton, ON

2024–Present

<https://lleulabs.com>

Independent software practice combining consultancy and R&D in web, audio, and music technology. Primary public project is lleu.site, a low-cost website builder and hosting provider. Handles full project lifecycle from concept through deployment, client communication, and technical execution.

Software Developer • Orderful • Vancouver, BC (Remote)

2021–2024

Full-stack development on high-bandwidth logistics communications platform (EDI). Built communication channel systems (AS2, SFTP, HTTP/S) enabling integration with modern and legacy shipping/logistics infrastructure. Collaborated extensively in team environment with code review, technical planning, and cross-functional coordination.

- * Developed reliable systems for high-throughput, mission-critical data exchange
- * Worked across full stack to maximize platform stability and market penetration

Software Developer • St. Joseph Communications / Rogers Media • Toronto, ON

2016–2021

Full-stack web and generalist development supporting editorial and design teams across major magazine titles (Maclean's, Chatelaine, FASHION, Today's Parent) and Rogers Radio. Designed and built digital publishing pipelines, editorial tooling, web features, and workflow automation.

- * **Apple News integration:** Designed and built templating system that automated intake, reformatting, and publication of content for bi-weekly Maclean's issues on Apple News platform. Developed companion desktop editor enabling direct content editing and auto-publication for editorial teams. Collaborated with Apple and cross-functional development team on end-to-end publishing pipeline.
- * **Workflow automation:** Programmed and configured Enfocus Switch (node-based automation system) using XSLT, Python, and JavaScript to streamline publication workflows
- * **Systems integration:** Built tools connecting Adobe Creative Suite, Apple News, CMS platforms, and production systems
- * Client-facing technical communication with creative directors and editorial leadership

Electrical & Grip Equipment Specialist • PS Production Services • Toronto, ON

2010–2015

Hands-on technical work in film/TV lighting equipment repair and electrical distribution. Started in repair department, promoted to manage electrical equipment division. Responsibilities included machining (steel/aluminum parts), electrical maintenance on high-voltage grip/lighting gear, power tool operation, parts salvage, and equipment QA testing.

- * Basic fabrication: metal work, hand finishing, power tools, manual machining
- * Electrical troubleshooting and maintenance on professional lighting systems
- * Warehouse management and equipment inventory oversight

Technical Skills & Tools

Programming & Development

TypeScript/JavaScript • Node.js • Python • React • Vue • Swift/iOS • HTML/CSS • Shell • SQL (PostgreSQL, MySQL) • MongoDB • Redis • CI/CD • Figma • Adobe

Audio & Music Technology

UAD Luna + plugin suites · Web Audio API · MIDI/MCU protocols · Audio routing & signal flow · Low-latency system configuration · Home studio recording/engineering · DAW control systems

Interactive & Workflow Systems

Enfocus Switch (node-based automation) · API integration · Real-time audio processing · Web-based interactive applications · Experience with Unity/C# (VR prototyping)

Fabrication & Hardware

Basic Arduino/Raspberry Pi · Electronics breadboarding (guitar pedal circuits) · Metal machining & fabrication · Power tools & hand tools · Electrical systems maintenance · Audio hardware integration · Physical media production (cassette duplication pipeline)

Infrastructure & Deployment

OVH · AWS · Self-hosted systems · Linux server administration

Education & Recognition

- * **FACTOR Canada** – Artist Development Grant Recipient (2022)
- * **University of Toronto** – Coursework in English Literature, Classics, Linguistics, and Art History
- * Past volunteer software development work with UN-aligned organizations (Drupal platform development, 2013–2014)

C, Golang, Go, Js, Ts, C, C++, C#, Java,, Kotlin, Scala, Elixir, Phoenix, Critical Thinking, Objective, database management, Ruby, Rails, back-end, front-end, full-stack, testing, tdd, automated testing, complex systems, APIs, optimization, architecture, Vue.js, Vue, jQuery, Angular, framework, integrations, languages, dsl, Lua, toml, yaml, kubernetes, containers, localstack, ui, ux, design, graphic, product design, scalability, security, performance, frontend backend, laravel, spring, springbok, server, debug, refactor, problem-solving, leadership, staff, principle, cross-functional, prototype, prototyping, customer-facing, client-facing, client, customer, listening, attentive, polite, active, management, relationship,