

HERMANN PAUWELLS RIVERA

Software Engineer | C++ · Audio/DSP

Monterrey, NL, Mexico · hermann.pauwells.rivera@gmail.com · +52 667 757 5419 · linkedin.com/in/hermann-pauwells-rivera · github.com/HermannPR

PROFILE

Software engineer focused on C++ and audio/DSP (JUCE), with full-stack experience in TypeScript, React/Next.js and Node.js, graduating in December 2026 with a Computer Science Engineering degree from Tecnológico de Monterrey. I built a VST3 synthesizer with automated tests and software for real businesses (e-commerce, real-time reservations). I also work with machine learning.

TECHNICAL SKILLS

Languages: C++, Python, TypeScript/JavaScript, SQL, Swift, C#

Audio/Native: JUCE, VST3, DSP, CMake, pluginval

Web: React, Next.js, Node.js, Express, Supabase

Tools: Git, GitHub, GitHub Actions, CI, Unity

EXPERIENCE

Full-Stack Developer (Freelance) — Juguetería El Arbolito

2026–present

- Building the e-commerce and admin platform for a single-store retailer (catalog, cart, checkout, backend).
- Migrated a 2,395-product catalog from the legacy point-of-sale system (Eleventa) into PostgreSQL/Supabase.
- Integrating Mercado Pago payments and inventory sync between the online store and the in-store POS.

Freelance Web Developer — Client websites

2025–present

- Designed and built a portfolio site for a writer and audiovisual producer (Next.js, React, Tailwind CSS); on Vercel.
- Building a personal landing page for a corporate-compliance lawyer (Astro, React, Tailwind CSS); in progress.

Web Developer (scholarship service) — Ciberistas, Tecnológico de Monterrey

2025

- Fixed bugs and refactored legacy layouts on a youth coding program's web platform (React/TypeScript, Tailwind).

SELECTED PROJECTS

folk-park

Personal project

2026

- Wavetable VST3/Standalone synthesizer in C++20 and JUCE; deterministic MIDI generation and real-time DSP architecture.
- Automated suites (16/16 suites, 19/19 UI contracts) and validation with pluginval strictness 5.

Lumina Reservations (WorkHub MTY)

Academic team project · Node/Express, SSE, React

2026

- Implemented the reservation backend in Node/Express (services, repositories, controllers, migrations) and real-time occupancy updates over SSE.
- Built the floor map and the reservation flow in React/Vite (dashboard, filters, confirmation) with role controls.

HeatShield

iOS app

2025

Winner, Sustainability category, Swift Challenge Fest 2025 (Tecnológico de Monterrey)

- iOS app with real-time heat alerts (OpenWeatherMap), heat index and shelter maps.

Other projects: Credifiel Challenge (Datathon 2025) · Multi-agent warehouse simulation (RL) · RainLab Northsky · Jarvis — personal AI agent system · DreamOS · JesusGPT · Ojeada (LLM Touch Bar app) · claude-phone & PI3HUB (Claude Code on phone/Pi) · Mildred Pierce (band website) · GateGenius (HackMTY 2025).

EDUCATION

Computer Science Engineering (ITC) — Tecnológico de Monterrey, Monterrey Campus — 2021–2026 · Graduation: December 2026 · Available full-time from January 2027

ACTIVITIES

- SwiftTec Coding Community (2025): hackathons and innovation challenges · Music production (FL Studio).

Spanish — native · English — C1