

DAYAN RODRIGUEZ

SOFTWARE ENGINEER

Tampa, Florida

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github.com/MicroRJ

PROFILE

Software engineer programming independently since 2016, with experience spanning native systems, developer tools, Android libraries, and database-backed web applications.

Authorized to work in the United States without sponsorship

TECHNICAL SKILLS

Languages

Systems and tools

Web and data

Earlier platforms

C; working familiarity with JavaScript, TypeScript, SQL, Java, and Kotlin

Git, Win32, D3D11, compiler and VM architecture, emulation, memory management, debugging

SvelteKit, Node.js, PostgreSQL, REST/JSON, Vercel

Angular, Android, Firebase, JitPack

SELECTED ENGINEERING WORK

Orbiter - NES emulator and introspective debugger

2024-present

C / Win32 / D3D11

- Evolved a multi-year NES emulator project into a Windows debugger with live disassembly, hardware inspection, execution tracing, profiling, control-flow hit counts, breakpoints, and deterministic rewind.
- Separated emulator execution, debugger state, and the D3D11 interface behind explicit APIs, with automated snapshot-restore and determinism tests.

Room Exchange Inventory Concept - Database-backed inventory and storefront concept

2026

SvelteKit / PostgreSQL / Neon / Vercel

- Built and deployed an independent concept tailored to a local consignment workflow, with searchable public listings, permanent item pages, and a mobile staff inventory editor.
- Connected the catalog to Neon PostgreSQL, implemented signed server-only staff sessions, and added create, update, archive, and Facebook-post workflows.

Android interface libraries - Published Android graphics libraries

2019-2022

Java / Kotlin / Android / JitPack

- Published a configurable superellipse renderer through JitPack (37 GitHub stars and 9 forks) and built a Kotlin audio-visualization library with capture, parsing, scheduling, and renderer layers.

elf - Embeddable C-like scripting language

2023-present

C / Compiler / Bytecode VM

- Designed and implemented a lexer, source-located AST, IR lowering, bytecode backend, slot-based VM, closures, garbage collection, and a native C API.
- Created a contiguous table model with open-addressed key-to-index bindings; elf runs real Bob build descriptions and Orbiter configuration.

ADDITIONAL EXPERIENCE

Frontend Developer - Independent Contract Work

2019

Remote

Built several paid frontend prototypes for an online client, including product and catalogue interfaces for mobile-accessory and spirits businesses.

- Developed responsive interfaces using Angular, TypeScript, JavaScript, HTML, and CSS.
- Implemented client-side routing, reusable components and services, catalogue loading and filtering, and shopping-cart interactions.

Upholsterer - Family business

2021-present

Tampa, Florida

Complete customer upholstery jobs in a small family-run business, solving practical problems and carrying work from requirements through delivery.

- Perform hands-on production work, resolve practical job-specific problems, and help carry customer work through completion.