

Tiago Cerqueira

Software Engineer | Portugal

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SUMMARY

Software engineer from Portugal focused on writing correct, elegant systems code. I came up through C, C++, Java/Kotlin, and JavaScript/TypeScript, and for the last 3 years I've worked primarily in Rust - drawn to its paradigm and the discipline it brings to every other language I touch. My core interests are async, concurrency, performance, and increasingly distributed systems.

TECHNICAL SKILLS

Languages: Rust, C, C++, Java, Kotlin, JavaScript, TypeScript, Go, SQL (PostgreSQL), C#, Python

Frameworks: Tokio, Axum, Leptos, SolidJs, Next.js, .NET, Unity

Developer Tools: Git, AWS, Kubernetes, OpenTelemetry, Arduino

Domains: Android/AOSP, cryptography, distributed systems, embedded

EXPERIENCE

Infrastructure Engineer

2026

Deno Land

Remote

- Maintained and improved Deno Deploy, a serverless platform for hosting JavaScript/TypeScript applications on globally distributed infrastructure, with integrated builds, managed data services, and first-class OpenTelemetry observability.
- Co-authored the implementation of an internal, globally distributed key-value store for deployment state, serving high-throughput and low-latency requests on cost-efficient nodes.
- Extended and stabilized the platform post-launch through feature work, bug fixes, and reliability improvements across the control plane.
- **Technologies:** Rust; Tokio, Kubernetes; OpenTelemetry; TypeScript; Fresh; SQL; Postgres

Fullstack Developer

2024 – 2025

BitFashioned

Remote

- Lead developer of the department and main author of the code in production at a startup focused on cryptographic solutions and applications.
- Developed research cryptographic protocols in Rust, Rust backends, and some frontend work with SolidJs.
- Maintained AWS infrastructure.
- Built the “zanzibar” and “gotcha” projects from scratch (detailed in the Projects section).
- **Technologies:** Rust; Tokio; Axum; Criterion; AWS; TypeScript; SolidJs; SQL; Next.js

Fullstack Developer

2022 – 2024

Critical Techworks

Porto, Hybrid

- Engineered the audio stack for the head unit of next-generation BMW cars.
- Developed the hardware abstraction layer, Android service and audio settings application exercising the full breadth of AOSP and the audio domain.
- Drove a Rust initiative to introduce Rust in C++ codebases by presenting workshops to my team and others in the organization.
- **Technologies:** C++; Kotlin; Java; Android; AOSP

EDUCATION

FEUP – Faculty of Engineering, University of Porto

Porto

MSc in Electrotechnical and Computer Engineering – Automation and Robotics

2017 – 2022

PROJECTS

Personal website (dotdev) | *Rust, Tokio, Leptos, WASM, Tailwindcss* 2026 – Present

- Personal website hosted on Cloudflare Pages written completely in Rust.
- Static site generated with Leptos and client-side frontend rendered in Rust through WebAssembly.

Lox interpreter (lorax) | *Rust, Java, C* 2025 – Present

- Lox is a didactic programming language invented for the book “Crafting Interpreters” by Robert Nystrom.
- The book teaches compilers and interpreters using Java and C, so I rewrote it in Rust for the sole purpose of having fun and learn more about compilers.

Gotcha | *Rust, Tokio, Axum, WASM, SolidJs, SQL, AWS, Next.js* 2024 – 2025

- Captcha alternative where website developers embed a widget that protects websites from bots.
- Backed by a Rust server on AWS Lambda.
- Analyzes requests based on website interactions, proof of work, and browser fingerprinting.
- Developed a Next.js dashboard to manage API keys and configuration of the widget.

Zanzibar | *Rust, Tokio, Axum* 2024 – 2025

- Research project that aimed to evaluate the viability of a novel cryptographic paper for Worldcoin private iris comparisons.
- Implemented the paper’s algorithm with rigor.
- Tackled the two big challenges of huge data sizes and (de)serialization costs; squeezed every inch of performance and proposed algorithmic optimizations.

susync | *Rust* 2023 – Present

- Tiny pet project started while learning Rust, to bridge C++ callback APIs to async Rust.
- Started as a convenience library for me but I thought it could be useful for other developers in the community.

Data glove – Master Thesis | *C/C++, Arduino, IMU, Unity, C#/.NET, Python* 2022

- Developed a data glove capable of tracking hand pose in real time with high precision.
- Built the prototype from a casual glove with sensors and programmed the microcontroller to acquire and send data.
- Built the simulation and visualization in Unity. (GPA: 17/20)