Guilherme Monteiro

Backend & Systems Engineer · Tech Lead

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SUMMARY

Software engineer with 3+ years of experience in high-performance backend, Linux infrastructure, and local AI. Tech Lead at aiiaLabs, where I lead a team of 8 engineers and own architecture, deployment, and security for production services — promoted to Tech Lead three months after joining. I work mainly with Rust, Go, and Python, with a strong interest in low-level systems: I built a terminal emulator from scratch in Rust (Kokuban) and did undergraduate research on the Linux kernel at IME-USP. I also train and fine-tune LLMs for specific use cases, at aiiaLabs and in personal projects. Contributor to Ollama, NixOS, Fedora, and Qwen.

EXPERIENCE

aiiaLabs — Tech Lead Jan 2026 – Present

- Lead a team of 8 engineers, defining the architecture and stack for backend services on production Linux servers.
- Run code reviews focused on quality, security, and reducing technical debt.
- Plan deployments with monitoring and automated rollback; drive technical alignment with stakeholders.
- Fine-tune and adapt LLMs for internal use cases, served locally (Ollama/llama.cpp).

Rust · Go · Python · Linux · Docker · Kubernetes · AWS · Azure

aiiaLabs — Software Engineer Oct 2025 – Jan 2026

- Service deployment, networking, and security hardening (HTTPS, firewall) on SUSE Linux.
- Backend services in Rust, Python, and C++; deployment and environment documentation.

Qualcomm — Edge AI Developer (Intern) Jul 2025 – Aug 2025

- Real-time image-classification pipeline in C++ with ONNX Runtime, fully offline on the Snapdragon NPU (Hexagon DSP) with INT8 quantization.
- Took part in the Qualcomm Edge AI Hackathon.

Sgaria Tech — Software Engineer Jan 2024 – Oct 2024

- Web applications with Ruby on Rails, Hanami, PHP, and JavaScript.
- Ubuntu server administration: deployment, domains, and DNS.
- Translated the platform into English; remote collaboration with a Korean team.

Assistência com Foco — Junior Software Developer Feb 2022 – Mar 2023

- Automated internal processes and SAP Hybris integrations for customer service and maintenance tickets.
- Internal scripts and data-management tooling that cut manual work for the team.

Itaú Unibanco — Intern Dec 2020 – Sep 2021

- Self-initiated Python automation that eliminated repetitive manual tasks for the team.

PROJECTS

Kokuban — terminal emulator written from scratch in Rust May 2025 – Present

- Native terminal for Linux and macOS with a VT/ANSI parser, terminal grid, and PTY management built from scratch.
- GPU rendering via Metal on macOS and software rendering on Linux; inline image support.

Rust · Metal · PTY · VT/ANSI · github.com/guicybercode/kokuban.rs

OPEN SOURCE

Ollama Mar 2026 – Aug 2026

- Accepted PRs optimizing GPU memory allocation on Apple Silicon (~15% less VRAM overhead on M-series chips).
- OpenAPI spec fixes, Go code review, and issue triage.

NixOS Jun 2025 – Present

- Package and module maintenance, with documentation in Portuguese, Korean, and Italian.
- Declarative setup of AI/LLM environments with CUDA and Ollama for production.

Fedora Project Nov 2023 – Mar 2026

- PT-BR translation (Weblate), documentation, and packaging through the full upstream flow (Git, Bugzilla, Bodhi).

Qwen (Alibaba Cloud) Mar 2026 – Present

- Multilingual support, tool integrations, and documentation for non-English-speaking communities.

COMMUNITY & ACADEMIC

Omarchy Brasil — Founder & Organizer Jul 2026 – Present

- Meetup series on Omarchy, Hyprland, and Linux workflows for developers, streamed on YouTube.
- 4 editions so far; the first drew 500 registrations and 2k views. Edition #003: "Omarchy + Nix: From Code to System".

Teaching Assistant — IFSP / aiiaLabs 2025 – Present

- Introductory lectures on AI, Calculus I, and Linear Algebra.

Undergraduate Research — IME-USP

- Research on Linux kernel internals and operating systems.

Hackathons

- **Winner** — IBM Z Day Hackathon 2025.
- **Organizer** — Rust Online Hackathon (May 2025): 45 participants, USD 500 prize.
- **Organizer & judge** — FMU Hackathon (2025): designed the challenge from a real-world problem; judged projects over 3 days.

EDUCATION

IFSP — B.Sc. in Information Systems Feb 2023 – Aug 2026

Completed — degree conferral pending.

FIAP — Cybersecurity (Professional Qualification Certificate) in progress

USP — Continuing education in Inclusive Education & AI Aug 2025 – Nov 2025

CERTIFICATIONS

RHCSA (Red Hat Certified System Administrator) · CCNA (Cisco Certified Network Associate)

TECHNICAL SKILLS

Core languages: Rust, Go, Python, C, C++

Also: TypeScript, PHP, Ruby, Elixir, Zig

Systems: Linux kernel, terminal emulation (VT/ANSI, PTY), Metal

Infra/Cloud: Linux (SUSE, Fedora, NixOS), FreeBSD, Docker, Kubernetes, AWS, Azure

AI/LLM: Ollama, llama.cpp, ONNX Runtime, CUDA, RAG, LLM fine-tuning, INT8 quantization

Data: PostgreSQL, Redis, MySQL, Supabase

Web/APIs: REST, OpenAPI, FastAPI, Node.js

Security: hardening, system auditing, process analysis via /proc, HTTPS/TLS

LANGUAGES

Portuguese (native) · English (fluent) · Korean (advanced) · Mandarin (beginner)