Gustavo Widman

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PROFESSIONAL EXPERIENCE

Azion São Paulo, SP
Software Engineer II (Rust) Apr 2026 – Present
- Building **Rust** systems for edge/CDN workloads, focused on throughput, latency, and operational reliability.
- Working with application and security teams on performance-sensitive CDN internals.
- Contributing to distributed edge components under tight CPU and memory budgets.

CamelSec Remote
Technical Lead, Security Infrastructure Apr 2025 – Dec 2025
- Owned technical strategy across infrastructure, internal tooling, and security operations for a cybersecurity consultancy.
- Built reproducible **NixOS** environments and hardened operational workflows across **10+ machines**.
- Designed **WireGuard**-based internal networks and redundant staging environments for isolated client workloads.
- Ran penetration testing and red-team engagements for enterprise clients.

MW APP IT Consulting São Paulo, SP
Software Engineer Jan 2021 – Apr 2025
- Built software for enterprise clients across backend, frontend, and database layers.
- Optimized database query performance by **up to 2.43x** across **MS SQL**, **MySQL**, and **SQLite**.
- Led engineering teams delivering software for **CESP**, **Hunter Douglas**, and **CETESB**.

TECHNICAL SKILLS

- **Languages**: Rust, Go, C/C++, Python, TypeScript, C#/.NET, Assembly (x86/x86-64), SQL.
- **Systems & Infrastructure**: Linux, Nix/NixOS, Docker, Kubernetes, WireGuard, GitHub Actions.
- **Rust Stack**: Tokio, Actix, Axum, Rayon, `no_std`, memory-mapped I/O, concurrency, low-latency services.
- **Security**: Network Penetration Testing, Red Teaming, ISO 27001 Compliance, Reverse Engineering.

SELECTED PROJECTS

upstreamer (Rust reverse proxy) GitHub
- Built a reverse proxy in Rust with Kubernetes service discovery, hot config reload, active/passive health checks, and Prometheus metrics.
- Benchmarked **76,663 RPS** with **0.64ms p50** and **3.81ms p99.99**, ahead of HAProxy, nginx, Caddy, and Apache in the published setup.

FerriSync (Rust file synchronization research) Write-up
- Researching and prototyping an rsync-style Rust synchronization engine around rolling-hash bottlenecks, cache-aware lookup design, and multi-core delta computation.
- Framed around backup, storage, and data-center synchronization workloads rather than application-layer features.

NixOS Infrastructure GitHub
- Managed **6+ machines** with declarative NixOS configs for hardened infrastructure, DNS, mail, and mesh VPNs.

x86-64 Kernel (Rust, x86 Assembly) GitHub
- Built a bootable Rust `no_std` kernel with an x86 assembly bootloader, page-table setup, protected-to-long-mode transition, interrupt handling, a memory allocator, and VGA text output.

One Billion Row Challenge (Rust) GitHub
- Processed **1B rows in 1.8 seconds** using `rayon` parallelism and memory-mapped I/O.

LEADERSHIP & VOLUNTEERING

EchoSec (Cybersecurity League) São Paulo, SP
President & Counselor Mar 2023 – Present
- Organized Capture The Flag (CTF) events and hands-on security workshops.
- Mentored members in Linux fundamentals, binary exploitation, and offensive security practice.

EDUCATION

INTELI (Institute of Technology and Leadership) São Paulo, SP
Bachelor of Computer Engineering Expected Dec 2026
- Project-based program with industry-sponsored software delivery.