Bastian Gruber

Professional
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SUMMARY

Staff Software Engineer at Mozilla, shipping Rust, C++, and Python to hundreds of millions of Firefox users. Published author ("Rust Web Development" – Manning). Founder of Rust&Tell Berlin, the largest Rust meetup globally.

SKILLS

Languages: Rust, C++, Python, TypeScript, Go
Backend & Systems: Rust (Actix, Warp, Axum), Python (FastAPI), Node.js, async Rust, FFI/UniFFI
Patterns: REST, GraphQL, gRPC, distributed systems (P2P), microservices
Infrastructure: AWS, Google Cloud, Docker, Kubernetes, CI/CD, Grafana
AI Tooling: Claude Code, GitHub Copilot

PROFESSIONAL EXPERIENCE

Staff Software Engineer (promoted from Senior)   July 2024 - Present
Mozilla, Remote

- Implemented Oblivious HTTP (OHTTP) from scratch in application-services (shared Rust component cross-compiled to Swift/Kotlin via UniFFI) plus C++ and Rust for Firefox Desktop – users are now unidentifiable when making privacy-sensitive requests across all platforms
- Consolidated four separate favicon implementations into a single Image Service – extended an existing Python/Airflow pipeline rather than building a new microservice, now serving 4 teams from one manifest behind a GCS-backed API
- Maintained Firefox Push notification service (50k req/s, sub-200ms latency): reduced memory footprint, added circuit breakers, built Grafana dashboards
- Contributor and code reviewer for UniFFI, Mozilla's multi-language bindings generator (Rust to Kotlin, Swift, Python, JavaScript)
- Led "Rusty Fridays" internal education sessions, mentoring engineers across teams through Rust adoption

Senior Systems Engineer, Team Lead   2023 - 2024
Toposware, Remote
Core team of 4 building a peer-to-peer distributed network protocol from scratch in Rust.
- Achieved 10x throughput per node by profiling the actual bottleneck – optimized batch processing and serialization paths rather than redesigning the consensus layer
- Led benchmark initiative that revealed nodes were compute-bound on crypto operations, not network-limited – redirected optimization effort accordingly
- Built an EVM bridge connecting external Ethereum-compatible chains to the core network

Senior Software Engineer   2022 - 2023
Centrifuge, Remote
Protocol team building DeFi applications on Substrate/Polkadot in Rust.

- Implemented on-chain fund pool mutations – core feature for the lending protocol enabling live capital allocation adjustments
- Replaced manual documentation with CI-driven auto-generation from Rust source – eliminated persistent drift between code and public docs

Author, "Rust Web Development"   2020 - 2022
Manning Publications
Published end-to-end guide covering async Rust, web frameworks, and production deployment.

Sr. Solutions Architect (promoted from SA)   2020 - 2022
Twilio Inc., Remote

- Technical lead for Fortune 500 engagements: debugged latency issues, redesigned messaging flows, advised on architectures matching client team size and resources
- Created reusable engagement playbooks adopted across the EMEA Professional Services team

Systems Engineer   2019 - 2020
Kraken Digital Currency Exchange, Remote

- Migrated core banking services and API gateway from PHP to Rust, achieving 100x throughput improvement – enabling order-of-magnitude traffic growth without scaling hardware
- Worked directly with the CTO on privacy-focused architectural decisions for the trading platform

Earlier Career   2014 - 2019
Sr. Software Engineer across enterprise clients (OSRAM, Körber Digital, GIATA, Avenga) and startups (Dalia Research, blogfoster, smartB) in Berlin.
- Founded "Rust & Tell Berlin" meetup – grew it into the largest Rust meetup globally, still running years later
- Designed IoT authentication infrastructure at OSRAM for thousands of connected devices (Node.js, Go, Lua)
- First engineering hire at Körber Digital: built real-time sensor data pipelines on AWS
- Decomposed GIATA's monolithic ERP into 6 Docker-based microservices, improving system scalability

EDUCATION

Bachelor of Science, Computer Science
TH Ingolstadt – Scholarship from Allianz Deutschland AG (fully funded)