Holger Trahe

Senior Systems Architect & Rust Engineer

Lüdinghausen, Germany | +49 176 40134160 | trahe@mac.com
github.com/holg | pypi.org/user/holg

PROFESSIONAL PROFILE

Senior Software Engineer with over 20 years of experience and a unique background in Medicine. A Pioneer in Django development and Elasticsearch integration, now specializing in High-Performance Rust Architecture.

Expert in bridging the gap between dynamic environments (Python/Django/Flask) and systems-level engineering (Rust). Offers a rare combination of skills: from writing bare-metal Rust code and sophisticated Open Source Python plugins to architecting secure, automated CI/CD pipelines and managing complex Linux infrastructure. Proven track record of handling "One-Man-Army" architectural roles for critical business applications.

TECHNICAL SKILLS

Core Dev	Rust (Commercial Focus), Python (Expert), C++, SQL
Web	Django (Since v0.x), Flask, Actix-Web, REST, SOAP, JSON, XML
DevOps	Sophisticated CI/CD (GitHub/GitLab), Docker, Barebone Linux, Security
Data	Elasticsearch (Scale & Optimization), Postgres, Redis
Interop	PyO3, CFFI, WebAssembly (WASM)

OPEN SOURCE & INDEPENDENT ENGINEERING

Since 2023, while focusing on Rust professionally, I have dedicated my spare time to mastering Python-Rust interoperability.

gldf-rs-python (PyPI) *[Rust, Python, PyO3]*
Architected a high-performance Python binding for the Global Lighting Data Format. Used PyO3 to expose Rust's memory safety and speed to Python developers.

gldf-rs (Crates.io) *[Rust, WASM]*
Developed the core Rust library for GLDF, implementing cross-platform support (including WASM) and robust XML container handling.

Django/Flask Plugins *[Python]*
Created custom Python plugins and tools to enhance web framework capabilities, demonstrating deep knowledge of the Python ecosystem beyond standard usage.

FinTech SDKs *[Rust, Async]*
Engineered a Rust SDK for the Bitcoin.de Trading API (v4), featuring async architecture and HMAC-SHA256 authentication.

PROFESSIONAL EXPERIENCE

Dec 2024 – Present	**Senior Rust Engineer & Systems Architect** *SwissApGroup GmbH, Meggen* • Pure Rust Development: Focused exclusively on high-performance Rust development for core business logic.

- End-to-End Architecture: Acting as the sole Systems Architect and Administrator; responsible for the design, deployment, and security of infrastructure.
- Sophisticated Automation: Built complex CI/CD pipelines (GitHub/GitLab) to automate testing, linting, and deployment.

Sep 2023 – Dec 2024	**Senior Rust Engineer & DevOps Lead** *Maresystems GmbH, Kiel*

- Rust Implementation: Migrated and developed backend services using Rust, prioritizing type safety and concurrency.
- Infrastructure Management: Managed the full Linux server environment (SysAdmin), ensuring high availability.
- Pipeline Engineering: Designed complex CI/CD workflows to streamline the lifecycle from commit to production.

Jul 2011 – Aug 2023	**Senior Software Architect & Lead Developer** *Relux Informatik AG, Basel (Switzerland)*

- Django Pioneer: Served as Lead Developer for the core platform, adopting Django in its earliest stages (v0.x). Architected and scaled the app through major versions over a decade.
- Search Engineering: Pioneered the integration of Elasticsearch (early adoption) to build a lightning-fast search engine for complex lighting data.
- Strategic Modernization: Defined the long-term roadmap, transitioning legacy systems into modern Python-based architectures.

Prior Experience: Luxoworks GmbH (2009–11, Shareholder), Self-employed (2008–09), Artbey GmbH (2004–08), Medical/Tech Roles (1992–2004, incl. Sysmex, ABB).

EDUCATION

1997 – 2001	Computer Science Studies (University Level)
1989 – 1997	Medical Studies (Physikum passed; 1st State Exam passed)

Languages: German (Native), English (Excellent), Latin/Greek (Advanced)