Tobias Locker – Software Architect & Developer

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tobiaslocker

1 Tobias Locker

Software Architect · Senior Software Developer · Electrical Engineer

1.1 About Me

Software architect with experience across IoT, finance, and semiconductor domains.

I value simplicity, clear reasoning, and tools that serve the problem, not the other way around. Linux is home base; well-designed systems are the goal. If you're not using Vim motions, you're just losing time.

I learned the hard way — from bending copper to designing complex software systems. My strength is connecting details to design, translating complex requirements into reliable, scalable software.

1.2 Skills

- **Architectural Thinking:** Designing coherent, modular, and scalable systems.
- **Problem Solving:** Translating complex requirements into clear implementations.
- **Technical Leadership:** Driving architecture, mentoring teams, ensuring quality.
- **Systems Perspective:** Connecting embedded, application, and data layers.
- **Adaptability:** Language- and domain-agnostic, guided by principles not tools.
- **Environment:** Linux, open source, automation, continuous integration.

1.3 Education

1.3.1 2009–2014 B. Eng., Electrical Engineering & IT

Frankfurt University of Applied Sciences

Earlier Technical Formation Completed initial training as an electrician and master craftsman. Continuously expanded expertise in machine learning and modern software practices through online courses, hands-on projects, and independent study of books and technical literature.

1.4 Experience

1.4.1 2022–2024 Senior Staff Engineer / Software Architect

Infineon Technologies AG, *Design In Tools for Automotive Body Power*, Munich, Germany

Led modernization of complex design-in tools, transforming legacy C++/Qt applications into modular, maintainable systems. Collaborated with global teams to align designs on company level. Drove the adoption of a unified build system, package management, and documentation across multiple products, enabling reusable C++ components with Python bindings and providing seamless integration for scripting and communication between both languages. Established architecture documentation practices based on arc42 and C4 in a docs-as-code CI-driven workflow, fostering efficient processes and software best practices.

1.4.2 2019–2022 Software Architect / Software Developer / Quantitative Analyst

PEH Wertpapier AG, *Asset Management*, Frankfurt, Germany

Redesigned a technical scoring system into a scalable, containerized web application. Mentored colleagues and established modern development practices. Implemented a clean separation between backend computation and a responsive frontend, leveraging Python to orchestrate numerical computations via a high-performance C library. Improved performance, scalability, and usability for portfolio analysis. The application remains actively used and maintained.

1.4.3 2017–2019 Software Engineer

Device Insight GmbH, *Product Development*, Munich, Germany

Contributed to the design and development of an edge computing platform enabling reliable communication between distributed devices and cloud systems. Implemented core components in C++/Qt and Go, focusing on modularity, portability, and efficient deployment across embedded Linux environments. Automated build and cross-compilation workflows using Bash, supporting streamlined delivery pipelines. The role combined hands-on engineering with architectural responsibilities, spanning technologies from container orchestration to classic Unix/Linux tooling.

1.4.4 2014–2017 Engineering Consultant / Senior Engineering Consultant

Alten Engineering GmbH, Munich, Germany

Worked as a software engineer and consultant for automotive and semiconductor clients, including BMW Group and Infineon Technologies. Gained hands-on experience in C++ and Python/Qt development, contributing to embedded and desktop applications used in production and testing environments. Navigated complex requirements and balanced implementation pragmatism with software quality — lessons that strongly influenced later architectural decisions.

1.4.5 2011–2013 Working Student

VDE Testing Facility, Offenbach am Main, Germany

Assisted in EMC and acoustic testing, gaining early exposure to standardized test procedures, measurement systems, and product certification processes.

1.4.6 2004–2008 Electrician

MS Elektrotechnik, Friedrichsdorf, Germany

Worked in industrial and building installations, developing a solid technical foundation and practical understanding of electrical systems.

1.4.7 2000–2004 Vocational Training as Electrician

Elektro Team Krause GmbH, Bad Homburg, Germany

Completed formal apprenticeship as an electrician, combining vocational education with hands-on training in electrical installation and maintenance.