

# Tobias Locker – Software Architect & Developer

## Tobias Locker

Software Architect · Senior Software Developer · Electrical Engineer

tobias@tobiaslocker.de tobiaslocker

## 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.

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## 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.
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## Education

**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.

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## Experience

**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.

**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.

**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.

#### **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.

#### **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.

#### **2004–2008 Electrician**

*MS Elektrotechnik*, Friedrichsdorf, Germany

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

#### **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.