

TIMO VON HOLTZ

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EXPERIENCE

Axon 911

Senior Software Engineer

April 2025 – Present

Remote

Emergency communications platform deployed across 1,000+ agencies in 49 states. Originally built by Prepared — acquired by Axon in October 2025 and now operating under the Axon 911 umbrella.

- Built multiple radio vendor integrations, covering the >90% of digital radio vendor market share.
- Implemented P25 audio decoding using the DVSI Hardware Vocoder via direct serial connection, enabling real-time processing of Motorola radio traffic.
- Improved radio transcription quality by 40% through audio pipeline optimizations.
- Developed live playback for incoming radio transmissions using Kafka and LiveKit.
- Built the foundation of a Chat Assistant, allowing supervisors to query incident statistics with ease.

Neurelo

Senior Software Engineer

November 2023 – April 2025

Remote

Cloud data API platform that auto-generates REST and GraphQL APIs from database schemas. Seed-stage, ~12 person team.

- Designed and built usage tracking and usage-based billing using Lago and Stripe, establishing the company's first monetization infrastructure.
- Integrated Authzed (based on Google Zanzibar) to replace ad-hoc permission checks with a scalable, auditable authorization system.
- Designed and implemented the Access Policies system, enabling granular access control for API consumers.
- Built a user authentication system supporting social auth providers for customer-facing applications.
- Developed core platform capabilities for Neurelo Connect, enabling secure, AI-driven database access for AI agents.

MEQO GmbH (formerly medilyse GmbH / factis research GmbH)

Product Platform Architect

August 2020 – October 2023

Freiburg, Germany

Digital clinical assistant software for hospitals across Germany (iPad-based clinical workflows, Checkpad MED). Deployed in large hospital networks.

- Led the development of a Flutter-based patient app that became central to the product portfolio.
- Rearchitected internal services for horizontal scaling, enabling deployment across large hospital networks.

MEQO GmbH (formerly medilyse GmbH / factis research GmbH)

Senior Software Engineer

May 2019 – July 2020

Freiburg, Germany

- Optimized EventStore database queries, significantly reducing downtime and improving system reliability.
- Built a dynamic forms framework for structured clinical data collection across hospital workflows.
- Maintained and evolved a custom Haskell build system based on Shake.

MEQO GmbH (formerly medilyse GmbH / factis research GmbH)

Software Engineer

March 2016 – April 2019

Freiburg, Germany

- Built a data export platform implementing IHE, DICOM, and HL7 healthcare interoperability standards.
- Developed HL7 integrations with external hospital information systems.
- Migrated databases from SQLite to PostgreSQL, improving performance and scalability for production workloads.

- Led adoption of Git, replacing Darcs as the team's version control system.

Anchor Hosting

Software Engineer

October 2014 – December 2015

Sydney, Australia

- Built internal tooling in Haskell, improving development efficiency.
- Developed an OAuth2 server in Haskell for secure, internal service authentication.
- Contributed to open-source projects like Servant.

EDUCATION

Christian-Albrechts-Universität zu Kiel

Master's Degree in Computer Science

Thesis: Generating LLVM IR using Template Meta Programming in Haskell

October 2012 – September 2014

University of New South Wales

Visiting Research Student

February 2014 – September 2014

Christian-Albrechts-Universität zu Kiel

Bachelor's Degree in Computer Science

October 2009 – September 2012

SKILLS

Programming Languages

Go, TypeScript, Rust, Haskell, Dart

Real-Time & Audio

P25, SIP, RTP, IMBE/AMBE, Kafka, LiveKit

Healthcare

DICOM, IHE, HL7

Infrastructure & Tools

Docker, Kubernetes, PostgreSQL, GraphQL, OpenAPI, React.js, Flutter

Auth & Security

OAuth, OpenID Connect, Zanzibar/Authzed

LANGUAGES

Spoken Languages

English, German

CERTIFICATIONS

Machine Learning

Coursera — [coursera.org/learn/machine-learning](https://www.coursera.org/learn/machine-learning)

November 2013

Functional Programming Principles in Scala

Coursera — [coursera.org/course/progfun](https://www.coursera.org/course/progfun)

December 2013

Artificial Intelligence for Robotics

Udacity — [udacity.com/course/artificial-intelligence-for-robotics-cs373](https://www.udacity.com/course/artificial-intelligence-for-robotics-cs373)

February 2012