

Emil Hemdal

Security Aware Fullstack Developer



Master of Science and Engineering

9 Years of Professional Experience

LinkedIn: *emilhemdal*

Nationality: Swedish

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Profile

Emil is a security-aware developer with a broad background. He has worked across the entire software stack from OS to UX and has a deeper understanding of Linux combined with experience in networks and security.

He is quality-focused, focusing on longevity and testability of the software he develops, this combined with his problem solving ability acquired during his engineering degree and work life makes him a valuable asset in any company.

Skills

Personality: Leader, Problem-Solver, Supportive, Social

Programming languages: Python, JavaScript, Go, Bash, SQL, HTML, CSS, Java, PHP, Node.js

Testing Frameworks: Selenium, Playwright, Pytest

Frameworks: Spring, Laravel, Vue.js, HTMX

Software development: Docker, Git, Kubernetes, DNS, TLS, HTTP, TCP, TDD, JSON, XML, API development, Ansible

Databases: MySQL, MongoDB, Redis

Security: DependencyTrack, nmap, SonarQube, Cryptography, Security Awareness, Wireshark

Collaboration Frameworks: Scrum, SAgE, Kanban

Professional Experience

Senior Software Engineer
Hemdal Consulting

2024-01 -
Gothenburg

Freelance Software Engineering

Senior Software/Test Engineer
Volvo Cars (consultant)

2024-02 - 2025-03
Gothenburg

Emil developed a **Python-based test automation framework** for dynamic websites, ensuring early detection of production and QA faults. Emil deployed this on a **Docker Swarm** on **Linux Azure VMs**. Data was stored in **Postgres** and **Redis**. The frontend and API was developed using **FastAPI** and **HTMX**. Data generated was also presented in **Grafana**.

Emil was responsible for the **security** in the team, ensuring safe **certificate and access management**.

Emil also **mentored** junior employees in **git**, software engineering, and testing to improve the competence of the team.

Security Engineer
WirelessCar (consultant)

2023-06 - 2023-12
Gothenburg

At WirelessCar he helped his team with **automating** manual work using **Python**. Mostly work surrounding **certificate management**. Some of the work also covered support tasks organized using **ITIL**.

Emil inspired his team to use **typings and dataclasses in Python** to reduce developer overload as well as assisting the team to write **tests in pytest** to improve the quality of the code written.

Emil's experience in **git** made him the **go-to person** in the team when it came to git.

Secure Developer
Zacco Digital Trust

2020-09 - 2023-12
Gothenburg

Emil helped customers with security oriented tasks including **Security Scans**, **PCI-DSS** related questions, and **OWASP Top-10** guidance.

Emil actively helped develop **ideas** to improve **employee satisfaction** and **culture** by holding different events.

Emil's **leadership ability** earned him a promotion to **Team Lead** where he had responsibility as **manager** for four Secure Developers.

Emil also improved the **IT-management** at the office and ensured that the IT equipment was working well in the office.

Cloud Engineer 2022-11 - 2023-06
CEVT (consultant) Gothenburg

During Emil's initial time at CEVT developed software in **Java** using **Spring** which was deployed in a **Kubernetes** kluster in **GCP** using **ArgoCD**.

Emil was engaged in **CI/CD** pipeline development at CEVT. He particularly improved the **performance** and usefulness of the of the pipeline, packaging the applications into **containers** using **Docker**. In addition he added steps that performed **Software Composition Analysis** which produced **SBOMs** that were uploaded into **Dependency-Track** which was used to visualize the risk of the platform.

Emil started and organized a **security forum** at CEVT where designated **Security Champions** in the cloud teams could discuss security related topics in order to improve the overall security posture for the solution.

During the latter part of Emil's time at CEVT he developed software in **Go** for managing **geographical** areas. The software was designed with a **Clean Architectural** mindset together with **Domain Driven Design** influences.

Software Engineer 2020-11 - 2021-08
Volvo Cars (consultant) Gothenburg

Emil developed cloud software for the **Over-The-Air (OTA)** service. This code was written in **Java** using **Spring**.

The work included **troubleshooting** test rigs for testing the OTA upgrades. Unsupervised, Emil successfully fault traced an issue with the communication by capturing wireless traffic from the rig using **WireShark**.

Emil was part of the **Security Champions** at Volvo Cars.

Software Engineer 2019-05 - 2019-12
Plejd Gothenburg

During Emil's time at Plejd he developed software for a logistics system written in **PHP** using the **Laravel** framework.

Front-End Web Developer 2018-06 - 2019-04
Lin Education / Foxway Gothenburg

Emil worked on the **web-based learning platform** Loops which the front end was written in **JavaScript** using **Vue.js**. The webdevelopment included working with modern **HTML** and **CSS**.

Full-Stack Developer 2012-10 - 2016-08
Landstinget Dalarna / Region Dalarna Falun

Emil developed software for managing and **automating** library related tasks as well as writing a **proxy**/remote access service for hospital staff. Much of the work was written in **PHP** utilizing **MySQL** databases, all of which was hosted on **Linux** servers which Emil also managed.

The proxy and most of the work during the latter part of Emil's time at Landstinget Dalarna were written in **Node.js**.

Education

MSE / M.Sc. Computer Engineering 2015 - 2020
Chalmers University of Technology Gothenburg

Emil took the master program **Computer Systems and Networks** where he took the **Security** and **Distributed Systems** tracks.

Emil **very engaged** in the student life on the campus where he helped the student division he was part of to clean up their **economy**.

Emil was also part of different committees improving the student culture.

He did his **Master's Thesis** on the topic *Erlang SGX - Protecting Confidential Erlang Workloads with Intel SGX*.

This work was done at **Ericsson**.

Link: <https://hdl.handle.net/20.500.12380/302200>