
PROFILE

An aspiring and social computer science student with a passion for learning. Seeking to advance skills closer to hardware and research & development. Areas of interest: Hardware-software co-design, embedded, high performance computing & software optimisation.

EDUCATION

Chalmers University of Technology - M.Sc

Gothenburg, Sweden

Computer Science programme, Master of Science in High-Performance Computer Systems

2020 - 2025

- Relevant Coursework: Computer architecture, Parallel Computer Architecture, High-performance Parallel Programming, Dependable Real-Time Systems, Real-Time Systems, Network on Chip, Sustainable Computing, Operating Systems, Compiler Construction, Distributed Networks.
- Volunteering: Board member - Programkommittén PU, Chairman - Student Educational Committee (snIT), Board member - Party arranging committee (sexIT).

EXPERIENCE

Master Thesis: GPU-Acceleration of Trajectory Planning Algorithms

Gothenburg, Sweden

*Zenseact***Currently** - Jun. 2025

- GPU acceleration of real time trajectory planning algorithms using embedded C++ and CUDA.
- Deep performance analysis on execution time, power consumption and memory footprint.

Embedded Software Developer

Gothenburg, Sweden

Kvaser AB

Jun. 2024 - Sep. 2024

- Replaced the wireless communication chip in their radio device, increased transfer & receive payload capability by 100% and sped up communications cycles significantly.
- Wrote the drivers for the communication chip and refactored the existing RTOS to target the radio chip.
- Developed on bare metal using C on a STM32.

Backend Developer

Gothenburg, Sweden

Opera Software

Jun. 2023 - Sep. 2023

- Developed backend logic for the websites encompassing the Opera GX project. (<https://gx.games>).
- Added XSS security to the entire application.
- Development was done in Java supported by common stack tools: Java Spring, AWS, Docker, Jenkins.

Frontend Developer

Gothenburg, Sweden

Opera Software

Jun. 2022 - Jun. 2023

- Developed frontend components for the websites supporting the Opera GX project (<https://gx.games>).
- Optimised the first contentful paint on the homepage by 100ms.
- Mainly developed in React, TypeScript, JavaScript and CSS with the following tools: Jenkins, AWS, Docker.

Frontend Developer

Gothenburg, Sweden

Volvo Connected Solutions - Volvo Group

Jun. 2021 - Sep. 2021

- Visualised information based on cloud data from trucks on internal websites, used as tooling.
- Developed using TypeScript, JavaScript and React, along with AWS and Docker.

Various Internships & internship abroad

Ghent, Belgium

Volvo Group & Volvo Cars

Gothenburg, Sweden

2017 - 2019

- International internship in Belgium.
- Created a testing rig in embedded C & C++, along with some data analysis in Python.

PROJECTS

Energy efficient hardware-software co-design of the DCT-II algorithm (C, RISC-V) - [Learn more](#)

- Co-designed a RISC-V hardware configuration with a C software implementation of the DCT-II algorithm.
- Focused on energy efficiency when deciding vector size/amount, cache sizes and core amount.
- Explored vector length agnostic SIMD extension.

Skal - Unix shell combining modern C++2x with legacy API (C++, UNIX) - [Learn more](#)

- Focused on a lightweight performant solution, deepening understanding of OS (Specifically UNIX).
- Explored C++ multiprocessing to support parallel command execution.

ModMark - Modular markup language (Rust) - [Learn more](#)

- Developed a modular markup language, striking a balance between Markdown and LaTeX.
- Modularity is achieved via packages that are WebAssembly programs, making the language limitless.
- Prioritised scheduling and compilation errors to eliminate LaTeX weaknesses.

SKILLS

- Languages: C, C++, Rust, Go, Java, JavaScript, TypeScript
 - Concepts: Parallel computing, Computer architecture, Optimisation, High performance computing, Embedded development, Hardware-software co-design, Hardware benchmarking,
 - Technologies: CUDA, OpenMP, MPI, OpenGL, gem5, Linux, Git, Java Spring, SQL, Docker, AWS, React
 - Soft skills: Inclusion, Team work, Adaptability, Quick learner, Positive attitude.
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