

# Arvid Boisen

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## EDUCATION

### Chalmers University of Technology

*M.Sc. in Computer Science — Algorithms, Languages and Logic*

Gothenburg, Sweden

Aug 2026 – Jun 2028 (Planned)

### Chalmers University of Technology

*B.Sc. in Computer Science and Engineering*

Gothenburg, Sweden

Aug 2022 – Jun 2025

- **GPA:** 4.78/5.0

## EXPERIENCE

### Software Engineering Intern

Amerden AGVS

Jun 2025 – May 2026 (Expected)

St. Augustine, FL

- Engineered and deployed a **C#/.NET 8** microservice to **Azure Container Apps** using **Docker**, reducing deployment complexity and enabling horizontal scalability.
- Designed a **gRPC** API and implemented health checks, ensuring high availability and efficient inter-service communication.
- Integrated **Microsoft Entra ID** for token-based authentication (OAuth2), securing sensitive endpoints and application data.
- Optimized database interactions by developing a data-driven service executing complex **SQL queries**, adhering to performance best practices.
- Led the migration of legacy code from .NET Framework 4.6 to .NET 8, significantly improving runtime performance and maintainability.
- Engineered a **Python** automation tool that applies **geometric algorithms** to vehicle parameters to calculate precise safety fields, automatically generating `.sdxml` configurations for **SICK safety scanners** and eliminating manual drawing errors.
- Commissioned systems on-site with clients, troubleshooting electrical wiring and logic for **Automated Guided Vehicles (AGVs)** to ensure successful hardware-software integration.

### Teaching Assistant

Chalmers University of Technology

Jan 2024 – Jun 2025 | Mar 2023 – Jun 2023

Gothenburg, Sweden

- Mentored 100+ students in Data Structures & Algorithms, Machine Oriented Programming, and Computer Systems Engineering.
- Led lab sessions, guiding students in debugging and optimizing low-level **C** and **Assembly** code for complex assignments.
- Provided detailed code reviews and feedback to accelerate student learning and ensure adherence to clean code principles.

### RPA Developer Intern

Volvo Cars

Jul 2022 – Aug 2022 | Sep 2021 – Nov 2021

Gothenburg, Sweden | Madrid, Spain

- Developed and implemented **robotic process automation (RPA)** solutions using **Blue Prism** to automate manual processes within the Finance department.
- Practiced **Agile methodologies** such as **Kanban** in a **6+ team setting** with daily stand-ups and sprint planning.
- Automated workflows using **Blue Prism**, **Excel**, **SAP**, **Salesforce**, and **ServiceNow**.
- Successfully **built and deployed automations** using **Power Automate (DPA)**.
- Verified and implemented **quality assurance policies** on Blue Prism processes.
- Performed **maintenance and support** activities with senior developers.
- Documented design decisions and implementation details in project documentation (**SDD**).

## TECHNICAL SKILLS

**Languages:** C# (ASP.NET Core), Java, C, Python, Rust, SQL, Assembly (MIPS), Haskell, Bash

**Backend & Data:** gRPC, Protocol Buffers, REST APIs, PostgreSQL, Redis, Microservices

**DevOps & Tools:** Docker, Kubernetes, Azure Container Apps, CI/CD (GitHub Actions), Git, Linux

## PROJECTS

### Drone Platform for Safety in Testing 🚁 | Python, Docker, WebRTC, ROS 2, Redis

Jan 2025 – May 2025

- Co-developed a **full-stack platform** for AstaZero (RISE) to **automate safety surveillance** during **autonomous vehicle testing**.

- Architected a **distributed, microservices-based system** using **Docker** and **ROS 2** to control and monitor multiple **autonomous drones**.
- Optimized **video inference** performance by utilizing **CUDA** and **GPU acceleration** within Docker, reducing **CPU load** by **70%** during real-time detection.
- Implemented a **Redis-based message broker** to handle **high-frequency telemetry** data and **video frame synchronization** between the **Android** app and backend.
- Engineered a **RESTful API** and **WebSocket** interface to facilitate **bidirectional communication** between the backend drone logic and frontend dashboard.

**Boatle - Social Media for Boaters** 🚢 | *Rust, SQL, Kubernetes, CI/CD*

Nov 2024 – Dec 2024

- Developed a **high-performance Rust microservice** to handle **real-time AIS data** from a **WebSocket**, efficiently persisting it in **PostgreSQL**.
- Implemented comprehensive monitoring using **Grafana** and **Prometheus** to track key performance indicators, ensuring **optimal data processing latency** and **high service availability**.
- Orchestrated the **deployment and scaling** of the backend using **Kubernetes** to achieve **high availability** and support a growing user base.

**Home Security System** 🏠 | *C, Embedded Systems, CAN-bus*

Aug 2023 – Oct 2023

- Collaborated with a team of five members to design and implement an **integrated alarm/locking system** using **embedded boards** and **CAN-bus communication**.
- Engineered a **central unit** that communicated alarms and device information to **peripheral devices** over **CAN**.
- Developed countermeasures against **replay attacks** and implemented **message encryption**.