# Mazunki Hoksaas

## Systems Programmer and Linux Specialist

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## Summary

Software developer with an interest in system's architecture, embedded software, compilers, linguistics, and philosophy.

I'm drawn to the world of free and open source software. I care about making things more accessible, open, and ensuring compliance to standards and ethics

## Work Experience

2022-present Teacher, Learnist, Remote

Teaching kids and adolescents the fundamentals of programming

2025 External Examiner, University of Oslo

Provided tests for IN2140, a course on fundamentals of computing

2014-2022 Maintenance and Mariner, Marine Service A/S, Oslo

Worked on maintenance of boats, ferries, and cargo ships

2016-2022 Ferry Sailor, Oslo-Fergene AS, Oslo

Assisted the captain and passengers aboard a local ferry

## Education

2024-present MSc Programming and Systems Architecture, University of Oslo

- I am working on efficient, performant and safe memory management within the context of IncludeOS, a minimal unikernel for microservices and cloud usage.
- O This includes interaction with VirtIO, QEMU and low-level hardware interactions.
- Besides my thesis, I have taken several courses in networking and fundamentals of programming languages and compilers.

Grad. 2025 BA Philosophy, University of Oslo

- Focusing on both theoretical and applied ethics
- With a minor in Linguistics

Grad. 2023 BSc Informatics: Robotics and Intelligent Systems, University of Oslo

2018–2019 Applied Data Science, Noroff Education

## Projects

## Services

Custom System I build and maintain up my own set of system services using the s6-rc and execline system. This allows me to have a better control, customizability and understanding of the systems I use on a daily basis

Linux Distro I am very used to many Linux distributions. I'm currently running Gentoo on my desktop, and NixOS on my servers and work machines, if not Debian. Each distro has its quirks, and none are perfect.

System

Operating As part of an assignment for a course on kernel building, we built a simple operating system. Throughout the course, we build different pieces over one

- O Setting up a bootloader on MBR-BIOS/legacy system on the IA-32 architecture
- Implement threading scheduling support, using non-preemptive and preemptive approaches
- Supporting virtual memory by using external storage for swapping out pages
- Added a basic file system to the OS similar to FAT

TJ Bot, Home assistant A project done for the first year of Studio at Noroff University & College by four students, using different APIs together to create a home device / bot. Built from scratch, incorporating various technologies such as Text to Speech, Speech to Text, visualisation, network communication, beyond others; and enhancing all this with a focus on security and privacy aspects

## Technical skills

English (C2), Spanish (C2), Norwegian (C2) and Catalan (C1) Languages

Programming Proficient in Python, C, and Java, and writing shell scripts that are POSIX compliant. Familiar with Haskell, C++, Zig Languages

I pedantically use Git for version control; Vim for editing; tmux, kitty and Sway Development for multiplexing; and SSH for jumping between different systems Tools

Systems and Experienced with virtualization using QEMU, and proficient in managing Linux-Platforms based systems, particularly with non-traditional init systems like s6 instead of systemd. Familiar with the Wayland display protocol, especially wlroots

## Volunteering

Language Tutor, Norsk Start, Oslo 2019-2020

> I helped foreigners improve their language skills in Norwegian and in English, in order to have a better chance at their goals

2017-present Technical support

> I often help newbies and more experienced people on forums and IRC-like chats track down problems with their systems, mostly Linux-related

2022-present Package Maintainer

> I've been maintaining several packages on Gentoo for a while. This requires working with different build systems, requirements, and expectations

### Open Source

Whenever something isn't working as I want in some FOSS/open source software I'm using, I fix it and provide a pull request

### Certifications

- 2018 Crowd- and Crisis Management, Redningsselskapet, Oslo
- 2018 Reduced Safety Coruse for seafarers, Redningsselskapet, Oslo
- 2018 Boat Driver License, Sjøfartsdirektoratet