Didrik **Munther**

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Websites
GitHub LinkedIn
didrik.tech

Languages
Swedish (native)
English (fluent)
German (B2)

Programming languages and tools
C/C++, Rust, PHP, SQL
Python, Go, Docker,
PyTorch, Scikit, Django

AWS, CodePipeline,
Github+Gitlab CI/CD,
Dokku

HTML, CSS, REST,
GraphQL,
JS/TS, Angular, React,
NextJS, Elysia, Vite,
Bun, Neo4j, YOLO,
RabbitMQ, Basler, Hailo

Achievements
7th place in Huawei
Hackathon 2022

Batch 17 KTH
Innovation

About me

A self-motivated and an inspired team player, who is looking for greater opportunities and growth, with lots of experience with fullstack development. I'm currently finishing up my masters in Computer Science at KTH in Stockholm. My special interest are fullstack development, low level optimization and algorithms, machine learning and computer vision, compiler construction, and much more. I'm currently writing my own compiler.

Experience

2023-2024 **Machine Learning Engineer & Head Architect** Semee Running

- Responsible for the technical development of an optical race timing system.
- Lead the development of the first version of the software, effectively evaluating the company to **$4.5 million**. (**YOLO, RabbitMQ, Python, Pytorch, AWS, Docker, Basler, Hailo**)

2023-2024 **Head of Internal Systems (voluntary)** THS Armada

- Responsible for managing and maintaining the company's internal systems, including hardware, software, and infrastructure. The role involves leading a team of IT professionals and compiling requirements from different stakeholders, ensuring the smooth operation of all internal systems, and developing strategies to optimize and improve processes. Implemented technical solutions which boosted revenue to **7.5 MSEK**. (**Python, Django, AWS, Docker, CI/CD, Dokku, Scrum**)

2023 **iOS Developer Intern** Bontouch

- Developed iOS apps & backend. (**Swift, SwiftUI, Neo4j, Rust**)

2022 **Teaching Assistant** KTH Royal Institute of Technology

- Taught and graded lab assignment in the Algorithms and Data Structures and the Principles of Programming Languages courses. (**Scala, Rust, C, Java**)

2021-2022 **Fullstack developer** Kambi

- Lead developer on GraphQL API project, providing easier onboarding for customers. (**Golang**)
- Maintained development of administration systems. (**React, Golang, SQL**)

2018-now **Founder & Developer** Didrik Munther IT & Datakonsult AB

- Developed financial report systems, cutting down report creation time by orders of magnitude. (**React, NextJS, Strapi**)
- Developed and integrated an E-commerce and inventory management system with integrations to systems such as Klarna. (**Angular 6, PHP, SQL**)

2018-2019 **Head of IT & Driverless (voluntary)** KTH Formula Student

- Developed sales website and administrated systems. (**PHP, Directus**)

2017-2018 **Fullstack developer** Buildflow (f.k.a. Byggvarulistan)

- Developed SPA E-commerce website. (**AngularJS, React, Django**)

Education

2023-2024 **Computer Science Graduate Exchange Semester** — Munich
Technische Universität München (TUM)

2022 **Human-Centered Machine Learning** — Helsinki
Aalto University

2019 - (2024) **Master of Science in Engineering, Degree Programme in Computer Science** — Stockholm
Kungliga Tekniska Högskolan (KTH)

Projects

Compiler and Language Workbench — Rost
https://github.com/didrikmunther/rost
It started as a compiler with a NASM backend, to explore the nuances of compiling to an assembly level (by using NASM). The core of the project has now been entirely changed, in order to explore the nuances of creating an IR representation of the program to support multiple backends. What has always been the backbone of the project has been supporting expressive error messages. Recently, LSP support was added, as well as a Webassembly backend. The current goal is to implement the Monaco editor in the browser demo, to show off the LSP support in the browser.

AI-powered (LLM) National Exams Training Software — HPMigo
Together with a group of friends with strong technical backgrounds, we developed an app allowing students to practice for national exams in a highly interactive and personalized manner. The software leverages AI, specifically large language models (LLMs), to generate customized practice questions, provide detailed explanations, and offer real-time feedback tailored to each student's unique learning pace and needs.

Personal Home Automation Platform — Pentry
Looking for ways to optimize every inch of my life, I developed several small systems, and eventually fused them together. The platform consists of systems such as: The Automated Laundry Website Scraper, scraping the building's free laundry slots and uploading them to my Google Calendar, simply allowing me to click "join meeting" to book a time. The Receipt Data Hub, allowing me to "share" or email a digital receipt to the system, in order to get data analysis of my purchases. I now simply press a button "generate shopping list" and the system calculates what is missing in the house.

C++ Game Engine with Lua Scripting — Third
https://github.com/didrikmunther/Third

Sound Baud Rate Demonstration
https://github.com/didrikmunther/sound-baud-rate Using fast fourier transforms (FFT), I created a protocol allowing two units to handshake and transmit and data to each other.

Web Audio Mixer
https://github.com/didrikmunther/react-audiocontext