

# Lars Halvor Hansen

## Student of Engineering & Economics

### EDUCATION

#### NTNU | ELECTRONIC SYSTEM DESIGN & INNOVATION MASTER. SPECIALIZATION IN SPACE SYSTEMS

August 2021 - now | Trondheim

#### NTNU | ECONOMICS - BACHELOR'S DEGREE

August 2023 - now | Trondheim

### EXPERIENCE

#### SONY SEMICONDUCTOR EUROPE | DIGITAL DESIGN INTERN

June - August 2024 | Lysaker, Oslo

- Built a tool that translates Python- and Yaml-based test code to the UVM framework in SystemVerilog. Automated a time-consuming and manual engineering task, increasing development efficiency.

#### DISRUPTIVE TECHNOLOGIES | EMBEDDED INTERN

June - August 2023 | Lysaker, Oslo

- Disruptive Technologies is a company in sensors and the Internet of Things (IoT). They make sensors with very low power consumption and sensor solutions for businesses around the world.
- Together with two other summer interns, I developed a new version of the sensor hub. It receives data from sensors and sends it to the cloud. This new version uses much less power thanks to the implementation of Nordic's nRF9160 chip and running ZephyrRTOS.

#### ORBIT NTNU | SYSTEMS ENGINEER & ELECTRICAL ENGINEER

September 2022 - June 2024 | Trondheim

- I have contributed to the development of our OnBoardComputer; planning and integrating STM32 on a 6-layer circuit board. I have also created a comprehensive power budget for our next satellite, where I prioritize which subsystems to optimize for power efficiency.
- Later, I became a systems engineer. During this time, I developed a power budget for the satellite. This budget accounted for the satellite's orbital trajectory, solar panel configuration and the power consumption of all the subsystems over time and in various modes. Of course I made it dynamically update as changes were made.

#### NTNU | LEARNING ASSISTANT IN INTRO TO ELECTRONICS

August - June 2023 | Trondheim

- NTNU selects some students to work as assistants in their courses. They are available during exercise sessions to help other students who have questions and need assistance.

#### SHIFTHYPERLOOP | BATTERY SYSTEMS ENGINEER

September 2021 - July 2022 | Trondheim

- Designed, produced, and tested a battery case for a battery system and a battery management system (BMS). The system is several hundred volts and I had to consider electromagnetic forces, BMS requirements, and chassis requirements.

#### UNGDOMSAKADEMIET | PRIVATE TUTOR

January 2019 - June 2020 | Skøyen, Oslo

- Private tutor in mathematics, science, and english. The students I have helped are now performing measurably better in school. (Link to case study)

### SKILLS

#### CODING AND HDL EXPERIANCE

Experienced:

Python • C++ • SystemVerilog

Familiar with:

C • Rust • JavaScript • ZephyrRTOS • Assembly  
• Yaml • Json

#### SOFTWARE

Experienced:

Altium • KiCAD • Solidworks • Experienced in graphic design. [halvorhansen.no/art](http://halvorhansen.no/art)

### LANGUAGES

Native language: Norwegian • Highly proficient in English • Basic knowledge of Spanish and Japanese.

### INTERESTS

#### COMPUTER PROJECT

August 2022 - August 2023

I have allways been very curious about how computers work on a fundamental level. Therefore, I made an 8-bit Turing-complete computer using the Von Neumann architecture. See more at [halvorhansen.no/hobbies](http://halvorhansen.no/hobbies).

#### MODELING OF COMPLEX SYSTEMS

July 2024 - now

I'm intrigued by how modeling complex systems can reveal the effects of policies on economic and environmental challenges. Therefore, I've embarked on a project to translate these insights into practical, real-world solutions. Please more at [halvorhansen.no/lambdasim!](http://halvorhansen.no/lambdasim!)

### REFERENCES

**Håvard Mellbye**, Employer, Disruptive Technologies

✉ [havard.mellbye@disruptive-technologies.com](mailto:havard.mellbye@disruptive-technologies.com)

☎ +47 99 32 64 52

**Jarle Steinberg**, Systems Engineer at ESA, Paris, France

✉ [jarle.steinberg@orbitntnu.com](mailto:jarle.steinberg@orbitntnu.com)

☎ +47 94 13 07 39