# Elias Evjen Hartmark

Master in Technology

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## **Work Experience**

Software Engineer 2024-2025

Kongsberg Discovery

Immediately after completing my master's thesis (available at: Brage NMBU), I joined Kongsberg Discovery as a Platform Software Engineer. Building on the skills developed during my studies, I gained valuable experience in company-driven projects and quality assurance in a professional development environment. I contributed to the Uncrewed Platforms team, working on cutting-edge sensor technology for products like the Endurance and Edge UAV (Underwater Autonomous Vehicle). Using C++ in a professional setting.

Aiding PHD student 2023

**NMBU** 

In the period from April 2023 until September 2023 I worked in collaboration with a PHD candidate and two Master students in creating a run-time verification website for monitoring the state and safety of robotic systems in the field. The result of this would be used in the PHD paper. I worked with ROS2, Python3, Flask, D3, Javascript, CSS, Jira and github (Linux environment). The runtime verification platform was further developed as a part of my master thesis. For this I implemented software developed by NASA called OGMA and FRET for automated generation of safety monitors for autonomic platforms. Which was tested both in field and in simulation. My work was accepted for the CASE 2024 conference, which I attended to demonstrate the results of the thesis. Look at my web page for video, might take a while to load the page: https://webcv-ekwa.onrender.com/

Learning Assistant 2022

TMP100 NMBU

TMP stands for Mechanical Engineering and Process Technology. I had not been a student of this subject in the past and was asked to contribute with teaching the students Fusion, 3d printing and laser cutting. All of which I am self taught having used a lot of time tinkering. In addition I was tasked with creating the BOM (bill of materials) for the subject.

Learning Assistant 2022-2023

TIP100 NMBU

TIP100 stands for Industrial Innovation and Technology. Here I and a colleague was tasked with teaching the students about kinematic movement and how to use Peter Corke's package for Matlab. I was rehired for the 2023 course as well.

Eik Projects 2021–2023

**NMBU** 

During my time so far at NMBU I have taken part in multiple projects through the Eik Lab initiative. The projects have been: Self Driving Car, Steel Chain Weighing Station and Temperature Sensors for Bee Hives. These projects have gained me a lot of experience in project management and development.

Shop Employee 2018-2020

Outland Oslo

In light of my coming studies I sought out work in my gap year, acquiring a job at a hobby store called Outland. Here I gained responsibility for the board game section of the store and worked with a lot of independence. The following year I was tasked with teaching new hirelings, which shows that my employers trusted me.

## **Education**

High School (Forskerlinje / Researcher Class)

Vestby VGS

2015-2018

Master's Degree in Technology and Robotics

NMBU

2019-2024

#### **Technical skills**

**Programming languages** Python, MATLAB, C++, LATEX, MySQL, Linux, Haskell

**Design skills** 3D printing, Laser cutting, Fusion, Solidworks, Blender

Machine skills Milling, Welding, Machine Technique, Lathe

**Programming skills**Git, Vim, Nano, Ubuntu, ROS, ROS2, RobotStudio, Arduino IDE, Flask,

Ogma, FRET

Embedded systems I2C, SPI

**Other skills** Silicon casting, painting, Clay sculpting, Tennis, Fotball, Movies

**Certificate** *Category B driving license* 

#### Reference

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## Languages

Norwegian—English

#### **Papers**

Master's thesis: https://hdl.handle.net/11250/3149122

CASE2024 Conference paper (journal not released yet): CASE2024 Home page Personal Website (long load time): https://webcv-ekwa.onrender.com/