



# Yohann Jacob Sandvik

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## Relevant skills

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I have used **Python** for data science and data management. I have experience with packages in the **scipy**-stack, machine learning models in **scikit-learn** and developing deep learning models with **PyTorch** and **Tensorflow**. I am comfortable with **MATLAB**, and familiar with the **Julia** and **R** programming languages.

I have experience with the **C** programming language, and the **Git** versioning system. I am comfortable developing software in a **Linux**-based environment, and automating processes with **BASH** scripts. I have experience with setting up virtual software environments using **Anaconda** and **pyenv**, and configuring containers using the **Singularity** framework. I have worked in projects using the **Agile**- and **Test-driven-development** methodologies, and have used **Jira** for task management.

## Experience

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### Ph.D Candidate in Data Science at NMBU

April 2022 - August 2025, Ås, Norway

- The research has been centered around application of cutting-edge deep learning models and computer vision for automating tasks in the logging industry.

### Embedded Developer at Data Respons R&D Services

October 2020 - March 2022, Høvik, Norway

- I Worked as a hardware developer and software developer on two major projects for Hensholdt Optronics GmbH and Yeti Move AS.
- I was also part of a two-person team that managed the Data Respons' social media accounts and translated articles for the company's website.

### Summer intern at NTNU

August - September, 2020, Trondheim, Norway

- Developed a small web-application where clinicians could test deep learning models.

### Summer intern at Nordic Semiconductor

July - August, 2019, Oslo, Norway

- Digital designer working with timing verification of integrated circuit designs.

### Head of Electronics Group at Revolve NTNU (Formula Student)

April 2017 - September 2018, Trondheim, Norway

- Revolve NTNU is NTNU's team in the international student competition Formula Student. In Formula Student, teams from different universities compete with Formula-1-style electric race cars that are designed, assembled and tested in-house.
- I developed part of the vehicle safety system, and as Group Leader I also supervised the work of eight embedded developers.

### Summer intern at Kongsberg Defence and Aerospace (KDA)

June - August, 2017, Trondheim, Norway

- Hardware engineer in the student-project LocalHawk.

## Education

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### Ph.D. Courses at NMBU and UiO

April 2022 - August 2025, Ås, Norway

- Advanced courses in statistics and machine learning at NMBU and UiO.

### M.Sc. in Electronic Engineering (MTELSYS) at NTNU

August 2014 - June 2020, Trondheim, Norway

- Specialization in signal processing and communications with additional subjects in statistical analysis.

### Erasmus exchange programme at EURECOM

September 2018 - June 2019, Sofia-Antipolis, France

- A year of exchange at the graduate level.

### International Baccalaureate Diploma Programme (IBDP) at Ås VGS

August 2011 - May 2014, Ås, Norway

- With specialization in mathematics, physics and economics.

## Other Experience and Skills

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### ACADEMIC WORK

- 2025    **Using Deep Learning for Accurate Code-based Log Tracking from Forest to Sawmill**, *Manuscript*
- 2024    **A Comparative Literature Review of Machine Learning and Image Processing Techniques Used for Scaling and Grading of Wood Logs**, *Forests*, 10.3390/f15071243
- 2020    **Machine Learning for Classification of Myocardial Infarction and Heart failure Using Longitudinal Myocardial Strain**, *Master thesis (Grade A)*, <https://hdl.handle.net/11250/2778134>

### TEACHING EXPERIENCE

- Lecturer    **IMRT100 - Introductory Course, Subject-oriented Project**, NMBU, 2023 and 2024.
- Lecturer    **DAT200 - Applied Machine Learning**, NMBU, 2024
- Teaching assistant    **DAT300 - Applied Deep Learning**, NMBU, 2022, 2023 and 2024
- Teaching assistant    **TFE4172 - Introduction to Semiconductor Devices**, NTNU, 2020
- Teaching assistant    **TFE4280- Sensors and Instrumentation**, NTNU, 2017

### LANGUAGES

- Fluent in    **Norwegian and English**,

### VOLUNTEER ROLES

- 2017    **E&T dagene**, Head of the Business Contacts group at the student career fair.
- 2016    **NTNUI Jiu Jitsu**, Was responsible for managing the clubs finances for a year.
- 2014 - 2015    **Omega (student union)**, Part of the founding members of the student union's brewing committee