

## Instructor

Ecole/Institution/Société:

**Norwegian University of Life Sciences (NMBU), Norway / Akershus**

Discipline:

**Artificial Intelligence**

Type d'emploi::

**Full-time**

Date de publication:

**2025-02-23**

Personne à contacter:

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Instructor position within AI applied on image analysis of weeds

PhD position within AI applied on image analysis of weeds

Apply for this job

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About the position

The PhD position is for a period of 3 years.

Desired start date: within 1st September 2025

The project is a multidisciplinary initiative between the Faculty of Biosciences and the Faculty of Science and Technology. The main goal is to develop a sustainable weed management and image-based mapping of docks in Northern European Grasslands. Docks are among the most problematic weed species in grasslands and application of herbicides is the most common strategy to control them. In this project we will apply state-of-the-art machine learning and deep learning techniques on open- access and collected datasets to determine how accurately these systems can identify dock plants under Norwegian field conditions.

This project seeks to address these issues by leveraging state-of-the-art machine learning (ML) and deep learning (DL) techniques to accurately identify and map dock plants under Norwegian field conditions. Additionally, the project will explore the integration of robotic solutions for precise and sustainable weed control.

You will join the research efforts at the Department of Mechanical Engineering and Technology Management at Faculty of Science and Technology and contribute to its development. As a student in the PhD Programme Science and Technology , you will work towards your doctoral thesis and earn your PhD upon successful defense of your thesis.

## Main tasks

Perform high-quality scientific research and publish the outcome through relevant scientific channels

Develop an academic career and acquire strong scientific competences

Be a cooperative member of the research team

Take part in joint research activities such as case studies, data collection, and analysis

The successful candidate is expected to develop and submit a detailed research plan for the progress of the work towards a PhD degree during the first few months of the appointment. This plan should outline key milestones, research objectives, and a timeline to ensure the completion of the doctorate within the PhD contract period.

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## Competence

### Required qualifications

A Master's degree in Physics, Robotics, Data Science or related fields

Strong competence in data science and programming

Foreign degrees must correspond with the admission criteria for the PhD program.

Proficiency in both written and oral English in correspondence with the admission criteria for the PhD program.

Personal suitability and motivation for the position.

The following experiences and skills will be emphasized:

Expertise in image processing and analysis

Background in data science, particularly in machine learning and deep learning

Interest and knowledge of agricultural production

Expertise in Python programming for data analysis, model development, and implementation

The applicant's estimated academic and personal ability to complete the project within the time frame

Applicants who have recently graduated with excellent results may be given preference.

The successful applicant must meet the conditions defined for admission to a PhD programme at NMBU. For more detailed information on the admission criteria please see the PhD Regulations and the relevant PhD programme description .

Remuneration and further information

We offer:

Salary 532200 NOK per annum. For exceptionally well qualified candidates a higher salary may be considered.

Government pay scale position code 1017 PhD Research Fellow.

Formal regulations

The appointment is to be made in accordance with Regulations on terms of employment for positions such as postdoctoral fellow, Phd candidate, research assistant and specialist candidate and Regulations concerning the degrees of Philosophiae Doctor (PhD) at the Norwegian University of Life Science (NMBU)

The engagement is to be made in accordance with the regulations in force concerning State Employees and Civil Servants, and the acts relating to Control of the Export of Strategic Goods, Services and Technology. Candidates who by assessment of the application and attachment are seen to conflict with the criteria in the latter law will be prohibited from recruitment to NMBU.

Contact information

For further information, please contact Professor Ibrahim Abdelfattah Abdelhameed or Professor Ingunn Burud

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(do not use this e-mail for application, it is only for questions)

Information for PhD applicants and general Information to applicants

NMBU via Unsplash NMBU

Application

To apply online for this vacancy, please click on the 'Apply for this job' button above. This will route you to the University's Web Recruitment System, where you will need to register an account (if you have not already) and log in before completing the online application form.

Application deadline: 03.03.2025

Please note that all documents should be in English or a Scandinavian language.

By applying the candidate confirms that information and documentation submitted via the job application can also be used by NMBU in a possible admission process to the PhD program.

Interviews with the best qualified candidates will be arranged. Applicants invited for an interview are expected to present original diplomas and certificates.

The application must include:

Motivation letter (maximum 1 page)

Curriculum Vitae (with a list of education, positions, teaching experience, administrative experience and other qualifying activities, including a complete list of publications)

Certified copies of academic diplomas and certificates. ([i.e.](#) Diploma, transcript. Diploma supplement for both bachelor and master). Diplomas, transcripts and diploma supplements that are not in Norwegian or English must be uploaded in the original language. An English translation of these documents must also be attached.

Applicants from universities outside Norway are kindly requested to send a diploma supplement, or a similar document, which describes in detail the study program and grading system.

Documentation of proficiency in written and oral English in accordance with NMBU PhD regulation section 5-2 (3) .

Names and contact details for two references

Additional relevant documentation of professional knowledge (for example, list of scientific works). If it is difficult to judge the applicant's contribution for publications with multiple authors, a short description of the applicant's contribution must be included.

## About The Faculty of Science and Technology

The Faculty of Science and Technology (REALTEK) develops research-based knowledge and educates civil engineers and lecturers needed to reach the UN's sustainability goals. We have approximately 150 employees, 70 PhD students and soon 1500 students. The education and research at REALTEK cover a broad spectrum of disciplines.

This includes data science, mechanics and process engineering, robotics, construction and architecture, industrial economics, environmental physics and renewable energy, geomatics, water and environmental engineering, applied mathematics as well as secondary school teacher education in natural sciences and use of natural resources such as in agriculture, forestry and aquaculture. The workplace is in Ås, 30 km from Oslo.

What is it really like to work at the Faculty of Science and Technology (REALTEK) at NMBU?

- Guided tour of the Faculty of Science and Technology on Vimeo

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The Norwegian University of Life Sciences (NMBU)

NMBU will contribute to securing the future of life through outstanding research, education, communication and innovation. We have the country's most satisfied university students, who receive research-based education in a unique student environment. Our graduates gain a high level of competence in interdisciplinary collaboration and are popular in the labor market.

NMBU has internationally leading research environments in several subjects. Together with our partners in society and business, we contribute to solving some of the biggest societal challenges of our time. We focus on innovation, communication and entrepreneurship because we believe these challenges are best solved with joint efforts. We believe that a good working environment is characterized by diversity. If necessary, workplace adaptations will be made for persons with disabilities. More information about NMBU is available at [www.nmbu.no/en](http://www.nmbu.no/en)

Questions about the position

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Ingunn Burud

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