

Two postdoc positions in computer vision and deep learning for biodiversity monitoring

The Department of Ecoscience at Aarhus University invites applications for two postdoctoral positions to strengthen our research on image recognition, computer vision and deep learning applied to ecological monitoring. The successful candidates will help further develop analysis pipelines and implement next-generation sensors for automated monitoring of insects across Europe. The positions are part of the ongoing EU Horizon Europe projects.

Expected start date and duration of employment

These are 2-year postdoc positions, with a preferred start on 1 June 2026 or as soon as possible thereafter.

Job description

Insect declines are increasingly documented and represent an urgent ecological and societal challenge. Addressing this requires a major leap in how biodiversity data are collected, processed, and interpreted. We are expanding our research group working on image-based methods for large-scale biodiversity monitoring and invite applications from candidates eager to push the boundaries of automated ecological data collection. The positions focus on improving detection and classification performance of deep learning models applied to millions of images collected in European monitoring programs.

Key responsibilities include:

- Quantifying insect abundance, diversity, and biomass from image data
- Validating and benchmarking model outputs
- Developing efficient pipelines for localising insects on both simple backgrounds (e.g., uniform screens) and complex natural scenes
- Improving taxonomic classification, including the use of hierarchical classification schemes and anomaly-detection methods
- Testing and validating next-generation insect camera traps with on-device (edge) computing for real-time detection and classification
- Collaborating in an interdisciplinary team spanning ecology, computer science, engineering, and biodiversity monitoring
- Communicating results and working closely with international partners and stakeholder.

Together, these positions will contribute to developing scalable image-based monitoring tools capable of addressing fundamental questions in biodiversity and conservation.

Your profile

We are looking for candidates with strong skills in computer vision and image-based data analysis, combined with an interest in ecological applications.

Required qualifications:

- PhD (or equivalent) in computer science, biology, software engineering, or a related field
- Strong proficiency in Python, including experience with modern deep learning frameworks
- Solid understanding of applied statistics
- Experience working with large-scale image datasets
- Excellent English communication skills

Desirable qualifications:

- Experience with ecological datasets or biodiversity applications
- Experience with hardware integration, embedded systems, or edge computing

Application Deadline:
03 March 2026

Institute/Faculty:
Department of
Ecoscience

Faculty:
Faculty of Technical
Sciences

Academic contact person:
Toke Thomas Høye
Professor
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+4530183122

Vacant positions:
2

Number of months:
24

Hours per week:
37

Expected date of accession:
01/06/2026

(not required but beneficial)

- A track record of publishing technical or interdisciplinary work in relevant scientific journals

Motivation to work in an international and interdisciplinary research environment.

Who we are

The Department of Ecoscience is engaged in research programs, teaching curricula and advisory work covering the major biological sub-disciplines. We conduct world-class research in the areas of aquatic and terrestrial biology and ecology, arctic environment and ecosystems, biodiversity and conservation biology. The Department currently employs approximately 275 academic and technical staff, as well as many PhD students.

The successful applicant will join the Danish team in the project, which projects and will be associated with the Department of Ecoscience.

What we offer

The Department offers a vibrant and informal research environment with longstanding traditions for collaboration with elite international university partners and with the Danish Ministry of the Environment.

The working environment at the Department is based on teamwork and close working relations. English is widely spoken and we welcome applicants from abroad. The Department has a strong work-life balance policy and seeks a good gender and age balance. Read more about the services available when relocating to Aarhus University at www.au.dk/work.

Place of work and area of employment

The place of work is C. F. Møllers Allé 8, DK-8000 Aarhus C, Denmark and the area of employment is Aarhus University with related departments.

Contact information

For further information, please contact: Professor Toke T. Høye, tth@ecos.au.dk, +4530183122.

Deadline

Applications must be received no later than Tuesday, March 3, 2026.

Application procedure

Shortlisting is used. This means that after the deadline for applications – and with the assistance from the assessment committee chairman, and the appointment committee if necessary, – the head of department selects the candidates to be evaluated. All applicants will be notified whether or not their applications have been sent to an expert assessment committee for evaluation. The selected applicants will be informed about the composition of the committee, and each applicant is given the opportunity to comment on the part of the assessment that concerns him/her self. Once the recruitment process is completed a final letter of rejection is sent to the deselected applicants.

Letter of reference

If you want a referee to upload a letter of reference on your behalf, please state the referee's contact information when you submit your application. We strongly recommend that you make an agreement with the person in question before you enter the referee's contact information, and that you ensure that the referee has enough time to write the letter of reference before the application deadline.

Unfortunately, it is not possible to ensure that letters of reference received after the application deadline will be taken into consideration.

If you wish to add a referee **after** you have submitted your application, you must send this person's details (name, job title, place of work, and email address) as well as the name of the position you have applied for to: HR.Nattech@au.dk

Formalities and salary range

Technical Sciences refers to the [Ministerial Order on the Appointment of Academic Staff at Danish Universities under the Danish Ministry of Science, Technology and](#)

[Innovation.](#)

The application must be in English and include a curriculum vitae, degree certificate, a complete list of publications, a statement of future research plans and information about research activities, teaching portfolio and verified information on previous teaching experience (if any). Guidelines for applicants can be found [here](#).

Appointment shall be in accordance with the collective labour agreement between the Danish Ministry of Taxation and the Danish Confederation of Professional Associations. Further information on qualification requirements and job content may be found in the [Memorandum on Job Structure for Academic Staff at Danish Universities](#).

Salary depends on seniority as agreed between the Danish Ministry of Taxation and the Confederation of Professional Associations.

Aarhus University's ambition is to be an attractive and inspiring workplace for all and to foster a culture in which each individual has opportunities to thrive, achieve and develop. We view equality and diversity as assets, and we welcome all applicants.

Research activities will be evaluated in relation to actual research time. Thus, we encourage applicants to specify periods of leave without research activities, in order to be able to subtract these periods from the span of the scientific career during the evaluation of scientific productivity.

Aarhus University offers a broad variety of services for international researchers and accompanying families, including relocation service and career counselling to expat partners. Read more [here](#). Please find more information about entering and working in Denmark [here](#).

Aarhus University also offers a Junior Researcher Development Programme targeted at career development for postdocs at AU. You can read more about it [here](#).

The application must be submitted via Aarhus University's recruitment system, which can be accessed under the job advertisement on Aarhus University's website.

Aarhus University

Aarhus University is an academically diverse and research-intensive university with a strong commitment to high-quality research and education and the development of society nationally and globally. The university offers an inspiring research and teaching environment to its 38,000 students (FTEs) and 8,300 employees, and has an annual revenues of EUR 935 million. Learn more at www.international.au.dk/