

Jobbnoe ID: 302135
Deadline: 6/10/2026
Website: <http://www.ntnu.no>
Scope: Fulltime
Duration: Temporary

The Department of Computer Science has a vacancy for a

PhD Candidate in Robust Uncertainty Quantification for Risk-Informed AI Decision Making

This is NTNU

NTNU is a broad-based university with a technical-scientific profile and a focus in professional education. The university is located in three cities with headquarters in Trondheim.

At NTNU, 9,000 employees and 43,000 students work to create knowledge for a better world.

You will find more information about working at NTNU and the application process [here](#).

Video: <https://youtu.be/Xt-yHCN5QS0>

About the position

The successful applicant will work at NTNU in Trondheim. The Department of Computer Science, NTNU, will host the PhD position. The topic of the PhD fellowship is in probabilistic AI, a fairly new research area at the intersection between modern machine learning and statistics. Specifically, we will investigate methods for well calibrated uncertainty quantification, and their use in decision making. A successful candidate will be offered a three-year position, which could potentially be extended with teaching duties.

The PhD student will be conducting research in the area of probabilistic machine learning and AI-driven decision making under uncertainty. Modern AI systems are increasingly being deployed in high-stakes settings where decisions must be made responsibly and with a clear understanding of what the AI does and does not know. A key challenge in such settings is that AI models are never perfect: they are trained on limited data, may not fully capture the complexity of the real world, and are often applied in conditions that differ from what they were designed for. This research will develop principled methods for quantifying and communicating this uncertainty in a reliable and robust way. Good solutions to this problem have the potential to fundamentally improve how AI systems support decision making in critical applications. When an AI system can accurately express its own confidence, and flag when it is operating outside its area of expertise, decision makers can better manage risk, avoid costly mistakes, and ultimately trust the system's recommendations. The research will contribute to the foundations of safe AI, with relevance across a broad range of application domains where decisions carry real consequences.

While the PhD position is in Computer Science, multidisciplinary research is strongly encouraged in aiD, and the successful candidate would also collaborate with scientists from other research fields.

Are you motivated to take a step towards a doctorate and open up exciting career opportunities? As a PhD Candidate with us, you will work to achieve your doctorate, and at the same time gain valuable experience that qualifies you for a further career in higher education and research, in and outside academia.

Your immediate leader will be the Head of the unit for Data and Artificial Intelligence.

About the project

The Norwegian Center on [AI for Decisions \(aiD\)](#) has vacancy for a PhD fellowship in Computer Science. [aiD](#) is one of the new Norwegian AI research initiatives, funded by the Research Council of Norway and industry partners. It consists of 13 research partners and more than 60 partners from industry and public sector. It is led by NTNU and SINTEF. All open positions will be cross-linked on the aiD website.

Duties of the position

- Conducting research within topics described above, in collaboration with the supervisors and other members of the research group.
- Test and evaluate the solution in simulated and real environments.
- Disseminate results through publications and presentations.

The main supervisor will be Prof. Helge Langseth, and the candidate is also expected to work together with other researchers in his group and industrial partners of the aiD center.

Be prepared for changes to your work duties after employment.

Required selection criteria

- You must have a professionally relevant background in computer science, statistics, machine learning, mathematics or a related field, with a research-oriented master's thesis.
- Proficiency in Python and relevant ML frameworks (e.g., PyTorch, JAX).
- Strong mathematical background, particularly in probability and statistics.
- Good written and oral English language skills.
- Your education must correspond to a five-year Norwegian degree program, where 120 credits are obtained at master's level.
- You must have a strong academic background from your previous studies and an average grade from the master's degree program, or equivalent education, which is equal to B or better compared with [NTNU's grading scale](#). If you do not have letter grades from previous studies, you must have an equally good academic basis. If you have a weaker grade background, you may be assessed if you can document that you are particularly suitable for a PhD education.
- Master's students in their final year can apply, but the master's degree must be completed by July 2026.
- You must meet the requirements for admission to the PhD programme in Computer Science.

PLEASE NOTE: For detailed information about what the application must contain, see paragraph "About the application".

The appointment is to be made in accordance with [NTNUs guidelines for recruitment positions](#) for general criteria for the position.

Preferred selection criteria

- Familiarity with Bayesian inference methods (variational inference, MCMC, etc.).
- Experience with implementation of probabilistic AI methods; provide link to GitHub/GitLab or similar.

Personal characteristics

In the evaluation of which candidate is best qualified, emphasis will be placed on education and experience, as well as personal suitability for this position which include :

- Strong quantitative understanding and abstraction abilities.
- Acquires new knowledge quickly and can use existing knowledge in new ways.
- Good communication skills.
- Willingness to learn new fields in a multidisciplinary research environment.
- Be highly motivated to publish in academic conferences and journals within the area of the position

We offer

- An exciting job with an important [mission](#) in society
- Developing tasks in a strong and international professional environment
- Career guidance and [follow-up during the PhD period](#)
- Open and inclusive working environment with committed colleagues
- [Working capital](#) that can be used to implement the project
- [Mentor programme](#) as a [new employee at NTNU](#)
- Favorable terms as a member of the [Norwegian Public Service Pension Fund \(SPK\)](#)
- Free Norwegian language training at a basic level ([A2](#)).

As a PhD Candidate at NTNU, you will have access to [employee benefits](#).

Diversity

Diversity is a strength, and at NTNU we aim to be an employer that reflects the diversity in society and that makes use of the potential of the population's collective skills. Our vision is [Knowledge for a better world](#) and [our values are creative, critical, constructive and respectful](#). We believe that an organization that is equal, diverse and gender-balanced is essential for us to achieve our goals.

We strive to attract employees with different skills, life experiences and perspectives to contribute to even better problem solving of our societal mission in research and education.

If you think this position is relevant and interesting, we encourage you to apply, regardless of gender, functional ability and cultural background, or whether you have been out of work for a period of time.

At NTNU we want to increase the proportion of women in scientific positions. We have a number of [measures](#) to promote equality.

Salary and conditions

In the position of PhD Candidate, code 1017, your gross salary will normally be NOK 550 800,-per annum depending on qualifications and seniority. A 2% statutory contribution to the State Pension Fund is deducted from the salary.

The employment period is 3 years for the doctoral work.

For employment as a PhD Candidate, it is a prerequisite that you gain admission to the [PhD programme in Computer Science](#) within three months of your employment contract start date, and that you participate in an organized doctoral programme throughout the period of

employment.

The position is conditional on external funding.

As an employee at NTNU, it is important that you keep yourself up to date with academic and organizational changes and adapt to them.

For the necessary professional and social interaction, it is a prerequisite that you are physically present and available to the institution on a daily basis.

The appointment is carried out in accordance with the principles of the [State Employees Act](#), and [Export control](#) (legislation that regulates the export of knowledge, technology and services). Candidates who, after assessment of the application and attachments, are considered to be in conflict with the criteria in the latter act, will not be able to be employed.

About the application

The attachments (including a description of your scientific work) must accompany the application as these documents form the basis of the application assessment. The documents must be in Norwegian/a Scandinavian language or English.

Please note: the application will only be assessed on the basis of the information we have received by the application deadline. Therefore, make sure that your application clearly shows how your skills and experience meet the criteria described above. The application and all attachments must be sent electronically via [Jobbnorge.no](#). If you are invited to an interview, you must bring certified copies of certificates and diplomas upon request.

The application must include:

- Certified copies of relevant transcripts and diplomas. Candidates from universities outside Norway must send a Diploma Supplement or similar documentation, which describes in detail the program of study, the grading system, and the rights to further studies associated with the degree obtained.
- CV which includes information about education background, publication record and work experience.
- A research statement (maximum two pages) that documents key interests within the domain of the position, and how your background makes you suited for investigating those. If relevant, mention opportunities to collaborate with other scientists within aiD (see open positions on [aid-centre.no](#)).
- Contact information for at least two references.
- The applicants who do not master a Scandinavian language must document a thorough knowledge of English (equivalent to a TOEFL score of 600 or more).

If all, or parts, of your education has been taken abroad, we also ask you to attach documentation of the scope and quality of your entire education, both Bachelor's and Master's education, in addition to other higher education. If your institution uses "diploma supplement" (normal for most European institutions), you must attach this. A description of the documentation required can also be found [here](#). If you already have a statement from [Norwegian Directorate for Higher Education and Skills \(HK-dir\)](#), please attach this as well.

Joint work will be considered. If it is difficult to identify your contribution to joint work, you must attach a brief description of your participation.

When assessing the best qualified, we emphasize necessary qualifications such as education, experience and personal suitability. Motivation for the position, ambitions, and potential for research will also count when assessing the candidates.

NTNU recognizes a wide range of academic contributions and has committed itself to [The San Francisco Declaration on Research Assessment](#) and [CoARA](#) (responsible assessment of research and recognition of a greater breadth of academic contributions in accordance with NTNU's social mission).

General information

A public list of applicants with name, age, job title and municipality of residence is prepared after the application deadline. If you wish to be exempt from entry on the public applicant list, this must be justified. Assessment will be made in accordance with [current legislation](#). You will be notified if the exemption is not granted.

If you think this position looks interesting and in line with your qualifications, you are welcome to apply.

If you have any questions about the position, please contact Professor Helge Langseth at helge.langseth@ntnu.no.

If you have any questions about the recruitment process, please contact HR at the computer science department at hr@idi.ntnu.no

Application deadline: 10.06.2026

For practical information about [working at NTNU](#), please visit [this webpage](#).

[The city of Trondheim](#) is a modern European city with a rich cultural scene. [Trondheim is the tech capital of Norway](#) with a population of 200,000. The Norwegian welfare state, including healthcare, schools, kindergartens and overall equality, is probably the best of its kind in the world. Professional subsidized day-care for children is easily available. Furthermore, Trondheim offers great opportunities for education (including international schools) and possibilities to enjoy nature, culture and family life and has low crime rates and clean air quality.

NTNU - knowledge for a better world

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The Norwegian University of Science and Technology (NTNU) creates knowledge for a better world and solutions that can change everyday life.

Department of Computer Science

We are the leading academic IT environment in Norway, and offer a wide range of theoretical and applied IT programmes of study at all levels. Our subject areas include hardware, algorithms, visual computing, AI, databases, software engineering, information systems, learning technology, HCI, CSCW, IT operations and applied data processing. The Department has groups in both Trondheim and Gjøvik. The [Department of Computer Science](#) is one of seven departments in the [Faculty of Information Technology and Electrical Engineering](#).

Additional information

Contact person:

Helge Langseth , Professor

Phone: | E-mail: helge.langseth@ntnu.no

Place of service:

Høgskoleringen 1 7491 Trondheim (Trondheim Municipality)