

Jobbnorge ID: 278022
Deadline: 4/23/2025
Website: <http://www.ntnu.no>
Scope: Fulltime
Duration: Project

The Department of Computer Science has a vacancy for a PhD position

PhD Candidate in Artificial Intelligence for Time Series

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 Center for Research-driven Innovation NorwAI (<https://www.ntnu.edu/norwai>) explores ways to study and apply Artificial Intelligence (AI) technology in innovative ways. Together with many partners from academia and industry, we work in different work packages. The position is associated with the DATA work package. We aim for a close collaboration between the candidate and domain experts from our partners.

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 unit leader of Data and Artificial Intelligence.

About the project

Our partner Statnett (<https://www.statnett.no/>) operates the Norwegian power grid. As an organization, they collect large amounts of data including measurements from a variety of sensors. These measurements inform adjustments necessary to guarantee the stability of electricity supply.

Powerful neural nets have emerged as tools to model sequential data. In particular, transformer models have shown vast potential for time series data. The position will examine ways to apply machine learning models to improve the forecasting for time series. The research will measure not only the ability to accurately predict future measurements, but also investigate methods to explain the model output. These explanations are necessary to prevent errors and help operators maintain a robust system.

Duties of the position

- Complete the doctoral education until obtaining a doctorate
- Carry out research of high quality within the framework described above
- Academic publications and popular science dissemination
- Participate in the research group at NorwAI and DART (<https://www.ntnu.edu/idi/people/dart>)
- Participate in international activities such as conferences and/or research stays at foreign educational institutions

Be prepared for changes to your work duties after employment.

Required selection criteria

- You must have an academically relevant background within Artificial Intelligence.
- You must have a Master's degree in Computer Science, ideally with specialization in Artificial Intelligence, or equivalent. Your course of study must correspond to a five-year Norwegian course, where 120 credits have been obtained at master's level. Master's students can apply, but the master's degree must be obtained and documented before starting the position.
- You must have a strong academic background from your previous studies and have an average grade from your Master's degree study, or equivalent education, which is equal to B or better compared to [NTNU's grading scale](#). If you do not have letter grades from previous

studies, you must have an equally good academic foundation. If you have a weaker grade background, you may be considered if you can document that you are particularly suitable for a PhD education.

- You must meet the requirements for admission to the Doctoral Programme of the Faculty for Information Technology and Electrical Engineering (<https://www.ntnu.edu/ie/research/phd>).
- Good oral and written presentation skills in English.

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

If you cannot document skills in Norwegian, Swedish or Danish at [level A2](#) upon employment, you must complete [Norwegian courses](#) corresponding to at least 15 credits before the end of the employment period. NTNU will facilitate this.

The appointment is to be made in accordance with [Regulations for the Universities and Colleges Act \(university and colleges regulations\) and Regulations for the degrees philosophiae doctor \(ph.d.\) and philosophiae doctor \(ph.d.\) in artistic development work at the Norwegian University of Science and Technology \(NTNU\)](#) for general criteria for the position.

As a result of the new Act relating to universities and university colleges with associated regulations of 01.08.2024, NTNU has, during a transitional period (for decisions on employment in recruitment positions before 1 August 2025), chosen to use the terms of employment in the old [regulations of 31 January 2006 no. 102 on terms of employment for positions such as postdoctoral fellow, research fellow, scientific assistant and specialist candidate](#)

Preferred selection criteria

- Excellent programming skills
- Experience with AI projects and relevant tools and frameworks
- Good oral and written presentation skills in Norwegian/Scandinavian equivalent level A2

Personal characteristics

To complete a doctoral degree (PhD), it is important that you are able to:

- Work independently
- Present and discuss your research with other professionals
- Show curiosity and a strong motivation for the subject
- Analyze data, assess different perspectives, and draw well-founded conclusions
- Interest in working on cross-disciplinary problems and the operation of the power grid

Emphasis will be placed on personal qualities.

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
- As a public employee, you have favourable benefits as a member of the [Norwegian Public Service Pension Fund \(SPK\)](#).

You will be employed as a PhD Candidate at NTNU and will have access to [employee benefits and discounts](#).

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 536 200,- 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. If learning Norwegian (level A2 corresponding to at least 15 credits) is to be completed before the end of the employment period, the employment period can be extended by 10 weeks after completed and documented the Norwegian course.

For employment as a PhD Candidate, it is a prerequisite that you gain admission to the PhD programme in Computer Science (<https://www.ntnu.edu/studies/phcos>) 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, specifically the NRC funded Center for Research-driven Innovation NorwAI and its partner Statnett.

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 academic 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:

- Transcripts and diplomas for Bachelor's and Master's degrees
- CV
- Copy of Master's thesis (link suffices). If you have recently submitted your Master's thesis, you can attach a draft of the thesis. Documentation of a completed Master's degree must be presented before taking up the position.
- Project outline containing proposals for an overall description of research questions, theoretical perspectives, methodological design for the project and progress plan (maximum 1500 words/4 pages)
- Short letter of motivation (400 words/1 page)
- Possibly publications etc. other relevant research work
- Possibly certificates
- Names and contact information of three relevant referees

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 works 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.

Please note that the person hired will work with critical infrastructure and areas affected by controls on the export of strategic goods, services and technology. Candidates who do not meet the requirements for the necessary security clearance, access clearance and authorization as described in the National Security Act, the Export Control Act and the Act on the Implementation of International Sanctions (the Sanctions Act) cannot be considered (e.g. candidates from, among others, Russia, Iran, North Korea, China).

If you have any questions about the position, please contact Associate Professor Benjamin Kille, e-mail: benjamin.u.kille@ntnu.no. If you have any questions about the recruitment process, please contact HR, e-mail: hr@idi.ntnu.no.

Application deadline: 23.04.2025.

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

Place of service:

NTNU 7491 Trondheim (Trondheim Municipality)