

Jobbnorge ID: 235875
Deadline: 12/11/2022
Website: <http://www.ntnu.no>
Scope: Fulltime
Duration: Temporary

We are looking for a

Postdoctoral Fellow in use of AI in railway management

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 44,000 students work to create knowledge for a better world.

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

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

About the job

Department of Mechanical and Industrial Engineering has a vacancy for a postdoctoral Fellow in the Project and Quality Management Research Group (PKL), with special focus on railway management.

The postdoctoral fellowship position is a temporary position where the main goal is to qualify for work in senior academic positions.

The PKL Research Group is involved in research related to various aspects of project and performance management, including digitalization, quality and change management. NTNU is participating in the coming project FutuRe, funded through the EU-research programme Europe's Rail. The position is funded by this project, in co-operation with Jernbanedirektoratet.

The FutuRe project aims at providing new innovative technical requirements, methods, solutions, developments and services - including technical requirements and standards for future developments - based on the latest leading-edge technologies to make regional rail cost efficient, while meeting safety standards and improving reliability, availability and capacity of the railway system.

In this position as Postdoctoral Fellow you will be related to database requirements and applications of AI for customer information on regional railway lines. This part of the project you will work on requirements and definition of suitable data sources and formats, including train traffic data, first and last mile data and other data relevant for customer information. After relevant data is identified, your focus will shift to provision of AI based short- and long-term travel demands and customer information. You will take part in the interfacing with available data sources and datasets, implementations, and further improvements of the initial models, followed by improvement cycles considering algorithm and model improvements based on the quantity and quality of data sets and first results produced. Of particular interest is a summary and evaluation of the benefits of this technology on regional railways.

You are expected to be an active and integrated part of the academic environment at the department and to participate in cooperation with a number of stakeholders in the railway industry and work with the FutuRe project that funds the position.

Your immediate leader is Professor.

Duties of the position

- contribute required deliverables of the FutuRe project
- participate in relevant activities in the FutuRe project
- prepare scientific journal articles and conference papers
- collaborate with PhD candidates and master thesis students
- relate your work to required deliverables of the FutuRe project

Required selection criteria

- you must have completed a Norwegian doctoral degree or corresponding foreign doctoral degree recognized as equivalent to a Norwegian PhD in a relevant engineering discipline, a relevant engineering discipline like mechanical engineering, marine engineering, or civil engineering with a data or AI profile. (If you can document that the PhD thesis has been submitted, your application can be

assessed even if you have not yet defended your dissertation. Documentation of the obtained doctoral degree must be presented before you can take up the position)

- you must have a professionally relevant background in railway and/or project management
- interest in railway technology and digitalization
- knowledge of databases, AI and machine learning
- good written and oral English language skills

The appointment is to be made in accordance with [Regulations on terms of employment for positions such as postdoctoral fellow, Ph.D Candidate, research assistant and specialist candidate.](#)

Preferred selection criteria

- possibilities for frequent travel and/or stays of different length at relevant European demonstrator locations
- experiences from collaboration with a diverse set of stakeholders, professionally or academically
- Knowledge about transport related data and analyses
- relevant publications, published or work in progress
- good written and oral Norwegian language skills

Personal characteristics

- analytical, respectful and excellent at thinking «out-of-the-box»
- motivated, ambitious and eager to «walk new paths»
- collaborative, open-minded and able to take initiatives, able to work independently and in team, with high degree of personal responsibility
- good communication skills, both written and orally
- eager to disseminate knowledge, both nationally and internationally

Emphasis will be placed on personal and interpersonal qualities.

We offer

- exciting and stimulating tasks in a strong international academic environment
- an open and [inclusive work environment](#) with dedicated colleagues
- favourable terms in the [Norwegian Public Service Pension Fund](#)
- [employee benefits](#)

Salary and conditions

As a Postdoctoral Fellow (code 1352) you are normally paid from gross NOK 563 500 per annum before tax, depending on qualifications and seniority. From the salary, 2% is deducted as a contribution to the Norwegian Public Service Pension Fund

The period of employment is 2 years.

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 NTNU.

After the appointment you must assume that there may be changes in the area of work.

The position is subject to external funding.

It is a prerequisite you can be present at and accessible to the institution on a daily basis.

About the application

The application and supporting documentation to be used as the basis for the assessment must be in English.

Publications and other scientific work must follow the application. Please note that applications are only evaluated based on the information available on the application deadline. You should ensure that your application shows clearly how your skills and experience meet the criteria which are set out above.

If, for any reason, you have taken a career break or have had an atypical career and wish to disclose this in your application, the selection committee will take this into account, recognizing that the quantity of your research may be reduced as a result.

The application must include:

- CV and certificates
- transcripts and diplomas for bachelor's-, master's- and PhD degrees. If you have not yet completed your Ph.D, you must provide confirmation on your estimated date for the doctoral dissertation, or that your PhD thesis has been submitted
- a copy of the doctoral thesis. If you are close to submitting, or have recently submitted your thesis, you can attach a draft of the thesis. Documentation of a completed doctoral degree must be presented before taking up the position.
- academic works - published or unpublished - that you would like to be considered in the assessment (up to 5 items)
- example of research plan
- name and contact information of three 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. Description of the documentation required can be found [here](#). If you already have a statement from NOKUT, please attach this as

well.

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

In the evaluation of which candidate is best qualified, emphasis will be placed on education, experience and personal and interpersonal qualities. Motivation, ambitions, and potential will also count in the assessment of the candidates.

NTNU is committed to following evaluation criteria for research quality according to [The San Francisco Declaration on Research Assessment - DORA](#).

General information

[Working at NTNU](#)

NTNU believes that inclusion and diversity is a strength. We want our faculty and staff to reflect Norway's culturally diverse population and we continuously seek to hire the best minds. This enables NTNU to increase productivity and innovation, improve decision making processes, raise employee satisfaction, compete academically with global top-ranking institutions and carry out our social responsibilities within education and research. NTNU emphasizes accessibility and encourages qualified candidates to apply regardless of gender identity, ability status, periods of unemployment or ethnic and cultural background.

NTNU is working actively to increase the number of women employed in scientific positions and has a number of [resources to promote equality](#).

The city of Trondheim is a modern European city with a rich cultural scene. Trondheim is the innovation 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.

As an employee at NTNU, you must at all times adhere to the changes that the development in the subject entails and the organizational changes that are adopted.

A public list of applicants with name, age, job title and municipality of residence is prepared after the application deadline. If you want to reserve yourself 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 reservation is not accepted.

If you have any questions about the position, please contact Professor Nils Olsson, telephone +47 97713628, email nils.olsson@ntnu.no. If you have any questions about the recruitment process, please contact HR consultant Linn-Cecilie Felle Brattheim, e-mail: linn.c.felle@ntnu.no

If you think this looks interesting and in line with your qualifications, please submit your application electronically via jobbno.no with your CV, diplomas and certificates attached. Applications submitted elsewhere will not be considered. Upon request, you must be able to obtain certified copies of your documentation.

Application deadline: 11.12.2022

NTNU

NTNU - knowledge for a better world

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

Department of Mechanical and Industrial Engineering

We educate graduates who can create new products, operate and maintain products, and manage projects. The Department has a variety of bachelor's and master's degree programmes. We conduct wide-ranging research in fields such as technology, energy, product quality and development, and productivity. [The Department of Mechanical and Industrial Engineering](#) is one of eight departments in [the Faculty of Engineering](#).

Additional information

Place of service:

Dept. of Mechanical and Industrial Engineering 7081 Sjetnemarka (Trondheim Municipality)