

Postdoc in health data science at the Pioneer Centre for SMARTbiomed

The Department of Public Health at Faculty of Health at Aarhus University invites applications for a position as Postdoc in the field of machine learning for electronic health records to predict diabetic complications as per 1 August 2026 or as soon as possible thereafter. The position is a fixed-term full-time position for 32 months.

As a Postdoc at the Department of Public Health, you will be part of an internationally recognised department, where we work together to promote public health through research into areas that can prevent, treat and alleviate disease. We are involved in broad collaboration both internally and externally. We share our knowledge with citizens, decision-makers, business and industry, practitioners and other researchers – in municipalities, in the regions and both nationally and internationally. The department either contributes to or is responsible for teaching in medicine, public health science, sport science, optometry and nursing. At the Department of Public Health, you will have approx. 200 colleagues, including ninety academic staff members and a corresponding number of PhD students. We work closely with one another across different fields of study and prioritise a healthy work environment. The general tone among colleagues is informal. You can read more about the department [here](#) and about the faculty [here](#).

About your research project

As Postdoc in health data science your position is primarily research-based but may also involve teaching assignments. You will contribute to the development of the department through research of high international quality. In your daily work, you will work closely with colleagues on your project, where you will receive supervision and guidance.

Your main tasks will consist of:

- Independent research of high international quality, including publication.
- Development of transformer (or similar) architectures to predict diabetic complications based on data from electronic health records, cohorts and the Danish registries.
- Curation of a multimodal dataset based on clinical data from Steno Diabetes Center Aarhus and the Danish registries.
- Designing and implementing embedding strategies to integrate heterogeneous data modalities including biomarkers, prescription data, clinical free text, and retina images.
- Training and evaluating deep learning models at scale using the computational infrastructure at GenomeDK (Aarhus University) and the Machine Learning Platform of the Central Denmark Region.
- Implementation of robust evaluation frameworks beyond discrimination, including metrics in the survival framework, calibration analysis, and clinical utility assessments.
- Supporting reproducibility and open science practices, including code documentation, version control, and optional contribution to software packages.
- Collaboration across disciplines e.g. working with clinicians to develop clinically translatable and fair prediction models.

This position is based in the Machine Learning and Clinical Prediction (MLCP) Lab at Steno Diabetes Center Aarhus (SDCA). You will also be part of the Pioneer Centre for Statistical and computational Methods for Advanced Research to Transform biomedicine (SMARTbiomed) and work closely with researchers at our three hub-sites. SMARTbiomed is an international collaboration between Aarhus University, University of Oxford, and University of Copenhagen that aims to advance the development of methods and software for analysis and inference from massive human data, advancing applications in medicine. SMARTbiomed is anchored at the National Centre for Register-based Research (NCRR), Department of Public Health at Aarhus University, and led by Prof. Naomi Wray. The position is based at our site in Aarhus, but you can expect some travel to our sites in Oxford and Copenhagen. You can read more about

Application Deadline:
10 June 2026

Institute/Faculty:
Department of Public Health

Faculty:
Faculty of Health

Academic contact person:
Gitte Bundgaard Christiansen
gbch.ncrr@au.dk

Vacant positions:
1

Number of months:
32

Hours per week:
37

Expected date of accession:
01/08/2026

SMARTbiomed [here](#) and about NCRR [here](#).

You will report to Associate Professor, Adam Hulman (Senior Researcher at SDCA and leader of the MLCP Lab).

Your competences

You have academic qualifications at PhD level, for example within the following areas: machine learning, computer or data science.

We expect you to have some of the following qualifications:

- Background in data science, computer science, bioinformatics, statistics, or related fields with a relevant PhD degree (required).
- Experience with developing or applying natural language processing methods or large language models on text, time series, or multimodal data, preferably in the health domain.
- Knowledge of machine learning methods for predictive modelling.
- Experience with project management and open science principles and tools (e.g. GitHub), preferably on high-performance computing clusters.
- Advanced programming experience in Python.
- A genuine interest for the latest developments in AI (specifically LLMs), a passion for data science and its application in the health domain, and curiosity to learn about diabetes and its complications (e.g. cardiovascular disease)

As a person, you are enthusiastic and dedicated researcher who values inclusion. You are able to build relationships based on trust with students, colleagues and partners. As a communicator you communicate the newest and relevant knowledge in a committed, clear and comprehensible manner across disciplines to build bridges between machine learning research and diabetes. As a supervisor you are professional, inspiring and inclusive.

We expect you to be fluent in oral and written English. International applicants are expected to learn Danish, and Aarhus University arranges Danish teaching.

In order to be assessed as qualified for a Postdoc position, you must meet [these academic criteria](#).

Shortlisting will be used.

Questions about the position

If you have any questions about the position, please contact scientific coordinator at the Pioneer Centre for SMARTbiomed, Gitte Bundgaard Christiansen; Email: gbch.ncrr@au.dk.

Your place of work will be the National Centre for Register-based Research at the Department of Public Health, Bartholins Allé 2, DK-8000 Aarhus C, Denmark, or Steno Diabetes Center Aarhus, Aarhus University Hospital, Palle Juul-Jensens Blvd 11, DK-8200, Aarhus N, Denmark.

We expect to conduct interviews in June.

Terms of employment

- Appointment as a postdoc requires academic qualifications at PhD level.
- Further information on the appointment procedure can be found in the [Ministerial Order on the Appointment of Academic Staff at Universities](#).
- The appointment is in accordance with the [Danish Confederation of Professional Associations](#) (Akademikerne).
- Remuneration is in accordance with the above, and the [Salary agreement catalogue for staff at Health](#).
- The yearly base salary for a fulltime postdoc is between DKK 484.214,84 and DKK 538.720,20 depending on the years of working experience after achieved MSc degree. The base salary includes a position related supplement and pension (17.1 %). Additional supplement(s) for special qualifications can be negotiated.

Authorisation supplement(s) will be granted, if relevant for the position. Your local eligible trade union representative at Aarhus University negotiates your salary on your behalf.

- Researchers recruited from abroad are offered a [special researcher tax scheme](#) with a lower tax rate.
- Further information on qualification requirements and job description can be found in the [Ministerial Order on Job Structure for Academic Staff](#)

Application

Your application must include the following:

- Motivated application
- Curriculum Vitae
- Diploma
- [Template for applicant - postdoc](#)
- A list of publications
- A teaching portfolio. We refer to [Guideline on the use of teaching portfolios](#)
- A maximum of five of the publications of greatest relevance to the job may be submitted (optional)
- Research plan can be uploaded (optional)
- Coauthor statement(s) can be uploaded (optional)
- References/recommendations can be uploaded separately in the e-recruitment system (optional)

We refer to the faculty's [Guidelines for applicants](#).

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.

International applicant?

Aarhus University offers a broad variety of services for international researchers and accompanying families, including assistance with relocation and career counselling to expat partners. Please find more information about the International Staff Office and the range of services [here](#). Aarhus University also has a Junior Researcher Association and offers career development support. You can read more about these resources [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 37,000 students (FTEs) and 8.700 employees and has an annual revenue of EUR 1.106 billion. Learn more at www.international.au.dk/