Part-time IT-worker for the Bioinformatics Research Centre, Department of Molecular Biology and Genetics

We are looking for a candidate with research experience in bioinformatics, strong software development and strong problem-solving skills

Expected start date and duration of employment
This is a fixed-term position for 3 months, starting on April 1, 2025, and ending on June 30, 2025.

Job description
The key assignments will be to improve the software development in two key projects of the research group. The first is to optimise the codebase for the TRAILS software, which uses an advanced hidden Markov model approach to genomic inference of, e.g. speciation patterns. This includes understanding complex mathematics, optimizing high diemensional matrix multiplication and inversion and producing user-friendly software that can easily be extended. The second is to reimplement a very complex but computationally slow, shinyApp for understanding genomic introgression between humans and Neanderthals and add a more extendable interface.

Your profile
The following key qualifications will be an advantage

- Strong software development skills (Proficiency in programming languages such as R, Python, or similar)
- Understanding of advanced mathematical concepts: Knowledge of advanced statistical and mathematical methods, particularly in relation to hidden Markov models and genomic data analysis.
- Experience with high-dimensional data
- Experience with user-friendly software development: Ability to create software that is both efficient and user-friendly
- Strong problem-solving skills

Who we are
At BiRC we focus on developing computational methods for collecting, handling and analyzing genomic data. Research ranges from formulating models and theories about genome evolution, to constructing algorithms and developing computer programs to implement new analytical methods.
We have a strong emphasis on molecular and genome evolution, molecular population genetics, firmly grounded in statistical and algorithmic approaches to bioinformatics. Our research spans from addressing purely theoretical questions, to program development, applications to large empirical datasets.

See https://birc.au.dk/

What we offer
The Bioinformatics Research Centre (BiRC) offers:

- State of the art genomic data and computing facilities,
- an exciting interdisciplinary environment with many national, and international collaborators
- a research climate encouraging lively, open and critical discussion within and across different fields of research
- a work environment with close working relationships, networking and social activities
- a workplace characterised by professionalism, equality and a healthy work-life balance.

Application Deadline:
18 March 2025

Faculty:
Faculty of Natural Sciences

Institute/Faculty:
Department of Molecular Biology and Genetics

Academic contact person:
Mikkel Heide Schierup
mheide@birc.au.dk
+4527782889

Vacant positions:
1

Hours per week:
10

Number of months:
3

Expected date of accession:
01/04/2025

Place of work and area of employment

The place of work is Bioinformatics Research Center, Universitetsbyen 81, 3., Building 1872
DK-8000 Aarhus C.

Contact information

Mikkel Schierup (**mheide@birc.au.dk, +4527782889**)

Deadline

Applications must be received no later than 18 March, 2025.

Formalities and salary range

Salary and terms as agreed between the Danish Ministry of Taxation and the Confederation of Professional Unions.

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.

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/