UNIVERSITETET I OSLO

Jobbnorge ID: 213462
Deadline: 11/1/2021
Website: http://www.uio.no/
Scope: Fulltime
Duration: Permanent

Senior engineer position available for Python/Java systems developer

About the position

A position as senior engineer is available at the Centre for Bioinformatics.

The position will be part of the Oslo bioinformatics ELIXIR team, which is the Oslo node of the ELIXIR Norway project. The Oslo bioinformatics ELIXIR team is part of the Centre for Bioinformatics hosted at the Department of Informatics (IFI) at the University of Oslo.

The position is permanent contingent on availability of external funding.

The ELIXIR Norway project is part of a European bioinformatics infrastructure program to ensure timely sustainable use of data and bioinformatics tools for life sciences. ELIXIR Norway is currently jointly funded by the Norwegian Research Council and the partner universities and organizations.

Project description

The position will be part of the ELIXIR development/operations team at the University of Oslo (UiO), participating in the development and deployment of functionality for various national and international solutions provided by ELIXIR Norway, including:

- The University of Oslo node develops a range of services that are part of the portfolio of functionality provided or facilitated by ELIXIR Norway:
  - The FAIRtracks software ecosystem (https://fairtracks.github.io) providing standards and services for annotating genomic and epigenomic datasets related to DNA positions (genomic track data) with FAIR metadata, including the TrackFind service (http://trackfind.elixir.no) for querying such metadata. This software is primarily implemented with Python and Java, and is heavily using JSON Schema for specification/validation.
  - The Genomic HyperBrowser (https://hyperbrowser.uio.no), a Python-based framework providing an advanced statistical analysis engine for genomic track data, libraries and file formats for managing track datasets (the GTrack ecosystem, https://gtrack.no), a methodology for building dynamic web-tools rapidly using only Python code, aimed primarily towards prototyping (Galaxy ProTo, https://github.com/elixir-oslo/proto).
  - Several domain-centric databases with custom REST APIs and web GUIs, including a national database of DNA variation of Norwegian individuals.
  - Various collaborative efforts, typically providing infrastructure solutions for locally developed research software. Examples include tools for annotating cancer-related DNA variants and software for analysing adaptive immune receptors and repertoires using Deep Learning.
- Nationally coordinated development and deployment of the ELIXIR Norway infrastructure aimed at Norwegian researchers, which includes:
  - The Norwegian Federated European EGA (European Genome-Phenome Archive) node (https://ega.elixir.no), which will store DNA sequences and other sensitive data deposited by Norwegian researchers within a highly secured infrastructure called Services for Sensitive Data (https://www.uio.no/english/services/it/research/sensitive-data/), while allowing sharing of metadata and data with installations of other EGA installations in Europe, within the bounds of GDPR, national laws and research ethics approvals.
  - https://usegalaxy.no, a national web-based portal hosting Life Science-related tools and workflows provided by ELIXIR Norway with related cloud-based computational resources, including a pan-European job execution network. Usegalaxy.no is a national installation of an end-user framework called Galaxy (https://galaxyproject.org), which has a large international community of users and developers, especially within bioinformatics.
  - The National e-Infrastructure for Life Science (NeLS, https://nels.bioinfo.no), which provides storage resources for individual researchers and research projects, alongside related services, such as user/project management; features supporting ELIXIR help desk activities to researchers; data transfer to/from DNA sequencing facilities, analysis platforms and research data archives; and FAIR (https://www.go-fair.org/fair-principles/) solutions for research data management.

We are looking for a self-driven systems developer with a solid education in computer science or similar and with relevant development experience in Python and/or Java. The applicant should be motivated in working in an academic setting with development and deployment of infrastructure and software, supporting Life Science research activities. Interest and motivation with learning and making use of various cutting-edge technologies is important. Exact allocation of work tasks and projects will be dynamically determined based on the match of the candidate competence and motivation with arising needs.

Qualification requirements

Required competence:

- Relevant master degree or above in informatics or bioinformatics from college or university - relevant experience can weigh up for lack of formal education
- Software backend development experience in Python and/or Java. If the applicant only has experience with other programming languages, she/he must be willing to and capable of rapidly learning these languages by oneself. JavaScript experience is a plus, but will not be used for core development
- Experience and interest in Object Oriented Programming
- Competence in mathematics/statistics/bioinformatics and/or biology is not required, but is advantageous
- Good problem-solving capabilities
- Excellent communication skills in English, both oral and written
- Being self-driven and having the ability to work independently, as well as being a team player

Other important competence include:

- Experience in Test-Driven Development (TDD) or other Agile methodologies, Design Patterns, algorithm development and systems architecture
- Scientific programming/data analysis (NumPy, R, etc.)
- Open Source development experience, including git/GitHub-based version control, participation in Open Source communities, code contribution, etc.
- DevOps experience, including continuous integration and deployment: Jenkins, Travis CI, or similar
- Linux experience, including software dependency management and service-level operations.
- Workflow development/design, in e.g. CWL, Galaxy, or similar workflow engines
- Experience with container platforms (Docker, Podman, Kubernetes etc.), and package management (Conda/BioConda, Pypi, Poetry, etc.)
- Database management and architecture
- Web front-end development

We offer

- Salary according to SKO 1181 Senior Engineer, ranging from pay grade 563 900 - 650 300 NOK per year, depending on qualifications and experience
- Stimulating, challenging and friendly work environment
- An organization in continuous development with ambitious goals
- Membership in the Norwegian Public Service Pension Fund
- Attractive welfare benefits

How to apply

The application must include:

- Application letter
- CV (complete overview of education and work experience)
- Copies of educational certificates, transcript of records and letters for recommendation
- Names and contact details of 2-3 references (names, relation to candidate and telephone number)

The application with attachments must be delivered in our electronic recruiting system, please follow the link “apply for this job”.

Foreign applicants are advised to attach an explanation of their University's grading system. Please note that **all** documents should be in English (or a Scandinavian language).

Formal regulations

Interviews with the best qualified candidates will be arranged.

According to the Norwegian Freedom of Information Act (Offentleglova) information about the applicant may be included in the public applicant list, also in cases where the applicant has requested non-disclosure.

Inclusion and diversity are a strength. The University of Oslo has a personnel policy objective of achieving a

balanced gender composition. We also want to have employees with diverse expertise, combinations of subjects, life experience and perspectives. We will make adjustments for employees who require this.

If there are qualified applicants with special needs, gaps in their CVs or immigrant backgrounds, we will invite at least one applicant in each of these groups to an interview.

Contact information

For further information, please contact Professor Eivind Hovig, ehovig@ifi.uio.no

For questions regarding the recruitment system please contact HR adviser Torunn S. Guttormsen, phone: +47 22854272, e-mail: t.s.guttormsen@mn.uio.no

About the University of Oslo

The University of Oslo is Norway's oldest and highest rated institution of research and education with 28 000 students and 7000 employees. Its broad range of academic disciplines and internationally esteemed research communities make UiO an important contributor to society.

The Department of Informatics (IFI) is one of nine departments belonging to the Faculty of Mathematics and Natural Sciences. IFI is Norway's largest university department for general education and research in Computer Science and related topics.

The Department has more than 1800 students on bachelor level, 600 master students, and over 240 PhDs and postdocs. The overall staff of the Department is close to 370 employees, about 280 of these in full time positions. The full time tenured academic staff is 75, mostly Full/Associate Professors.

Additional information

Place of service:

Blindern 0373 Oslo (Oslo Municipality)