414_22_LS_CB_RE1

Job Reference

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Position

Junior Research Engineer (RE1)

Data de tancament

Dilluns, 31 Octubre, 2022
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Job title: Junior Research Engineer (RE1)

About BSC

The Barcelona Supercomputing Center - Centro Nacional de Supercomputación (BSC-CNS) is the leading supercomputing center in Spain. It houses MareNostrum, one of the most powerful supercomputers in Europe, and is a hosting member of the PRACE European distributed supercomputing infrastructure. The mission of BSC is to research, develop and manage information technologies in order to facilitate scientific progress. BSC combines HPC service provision and R&D into both computer and computational science (life, earth and engineering sciences) under one roof, and currently has over 770 staff from 55 countries.

Look at the BSC experience:
BSC-CNS YouTube Channel
Let's stay connected with BSC Folks!

Context And Mission

The Computational Biology group, led by ICREA professor Alfonso Valencia, is looking for a Master's student to work on a protein coevolution project, specifically on identifying species-specific protein interactions in bacteria using phylogenetics and coevolution. The project will involve analysing and interpreting differences in diverse bacteria protein-protein interaction (PPI) networks to detect functional differences in specific metabolic pathways and better understand different species of bacteria and their role in the ecosystem.

The successful candidate will join a dynamic research group within the Life Sciences department, which integrates independent senior scientists that work on various aspects of computational biology, ranging from bioinformatics for genomics and proteomics to computational biochemistry and text mining. The Researcher will work in a highly sophisticated HPC environment, have access to systems and computational
infrastructures, and establish collaborations with experts in different areas.

Key Duties

- Develop computational solutions, with special emphasis on AI methods, for the generation of synthetic instances of biomedical data of different types and modalities.
- Implement robust and reliable state-of-the-art generative models, such as Variational Autoencoders (VAE) and Generative Adversarial Networks (GAN).
- Interact efficiently with the HPC environment of the Barcelona Supercomputing Center.
- Explore the application of federated learning and explainability to the required tasks.
- Demonstrate skills in scientific communication.
- Establish and maintain collaborations with national and international researchers in both the public and private sectors in the area of healthcare and biomedical research.

Requirements

- Education
  - PhD in computer science or bioinformatics with a very strong AI component.
  - Alternatively, an MSc in AI or Bioinformatics, with a strong computer science background or background in applied mathematics/physics with demonstrated experience in AI methods.

- Essential Knowledge and Professional Experience
  - Experience in AI methodologies, specifically biomedical data analysis and synthetic data generation.
  - Deep learning frameworks (PyTorch, TensorFlow).
  - Interest in the life sciences area.

- Additional Knowledge and Professional Experience
  - Knowledge and experience in life sciences research.
  - Knowledge and experience in machine learning and data science:
    - Programming: Python (scikit-learn, NumPy, matplotlib), R, Java, C, C++, Git.
    - Fluency in spoken and written English.

- Competences
  - Capacity to use new software, understand new methods, or new follow new research lines.
  - Good communication and presentation skills.
  - Ability to work both independently and within a team.
Conditions

- The position will be located at BSC within the Life Sciences Department
- We offer a full-time contract, a good working environment, a highly stimulating environment with state-of-the-art infrastructure, flexible working hours, extensive training plan, tickets restaurant, private health insurance, fully support to the relocation procedures
- Duration: Open-ended contract due to technical and scientific activities linked to the project and budget duration
- Salary: we offer a competitive salary commensurate with the qualifications and experience of the candidate and according to the cost of living in Barcelona
- Starting date: 1/11/2022

Applications procedure and process

All applications must be made through BSC website and contain:

- A full CV in English including contact details
- A Cover Letter with a statement of interest in English, including two contacts for further references - Applications without this document will not be considered

In accordance with the OTM-R principles, a gender-balanced recruitment panel is formed for every vacancy at the beginning of the process. After reviewing the content of the applications, the panel will start the interviews, with at least one technical and one administrative interview. A profile questionnaire as well as a technical exercise may be required during the process.

The panel will make a final decision and all candidates who had contacts with them will receive a feedback with details on the acceptance or rejection of their profile.

At BSC we are seeking continuous improvement in our recruitment processes, for any suggestions or feedback/complaints about our Recruitment Processes, please contact recruitment [at] bsc [dot] es.

For more information follow this link

Deadline

The vacancy will remain open until suitable candidate has been hired. Applications will be regularly reviewed and potential candidates will be contacted.

OTM-R principles for selection processes

BSC-CNS is committed to the principles of the Code of Conduct for the Recruitment of Researchers of the European Commission and the Open, Transparent and Merit-based Recruitment principles (OTM-R). This is applied for any potential candidate in all our processes, for example by creating gender-balanced recruitment panels and recognizing career breaks etc.

BSC-CNS is an equal opportunity employer committed to diversity and inclusion. We are pleased to consider all qualified applicants for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability or any other basis protected by applicable state or local law.

For more information follow this link

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