

## [413\\_24\\_CS\\_DCC\\_RE2-R2](#)

### **Recruitment App Link**

<https://webapps.bsc.es/recruitment/job/3342>

### **Website Node ID**

63643

### **Job Reference**

413\_24\_CS\_DCC\_RE2-R2

### **Position**

Data Scientist for Big-Data Analytics Platforms, Genomics and Healthcare (RE2-R2)

### **Closing Date**

Wednesday, 31 July, 2024

**Reference:** 413\_24\_CS\_DCC\_RE2-R2

**Job title:** Data Scientist for Big-Data Analytics Platforms, Genomics and Healthcare (RE2-R2)

### **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, was a founding and hosting member of the former European HPC infrastructure PRACE (Partnership for Advanced Computing in Europe), and is now hosting entity for EuroHPC JU, the Joint Undertaking that leads large-scale investments and HPC provision in Europe. 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 1000 staff from 60 countries.

Look at the BSC experience:

[BSC-CNS YouTube Channel](#)

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We are particularly interested for this role in the strengths and lived experiences of women and

underrepresented groups to help us avoid perpetuating biases and oversights in science and IT research. In instances of equal merit, the incorporation of the under-represented sex will be favoured.

## **Context And Mission**

The Data-Centric Computing group from the Computer Science department at the Barcelona Supercomputing Center is searching for Data Scientist to work on High-Performance Data Analytic (HPDA) platforms and Medical Synthetic Data Generation. Mainly, time series analytics and generative models.

The main objective is to participate in two European research projects. The first is focused on developing methods to predict and estimate the resources requires by HPDA applications to better understand their behaviour and provide information to an orchestrator to manage them. The applications are ran in Big Data and Serverless frameworks such as Apache Spark or Lithops. The methods should use time series information to create an estimation of the resources and also a prediction of them over time. This work is performed in collaboration with Genomic researchers as the applications are focused on genomics analytics. The second is focused on developing models to generate Medical Synthetic Data (Generative AI), data that resembles to the original data provided but it cannot be traced back to the original data. In particular we focus on the development of models to generate synthetic images, but the position might not be limited to that. This work is performed in collaboration of hospitals from the European Union.

Both projects involve collaborating with researchers both from BSC and external and actual use cases. This includes communicating research results in project meetings with the rest of the partners online and presential (might require to travel outside of Spain twice a year).

## **Key Duties**

- Development of methods to estimate and predict application resource usage
- Development and integration of Synthetic Data Generation models for healthcare data
- Usage and metric extraction of Cloud/Serverles HPDA/ML platforms and applications (e.g., Apache Spark, Kubernetes,...)
- Contribution to the development of predictive models for HPDA/ML platforms for orchestration of applications
- Participation in internal and external meetings
- Give mutual support to other workers in the projects

## **Requirements**

- Education
  - Master in Computer Science, Data Science, Artificial Intelligence or similar
- Essential Knowledge and Professional Experience
  - A PhD in these fields is valued
  - Skills on Software Engineering
  - Skills on Software Engineering
  - Basic knowledge on infrastructure (cloud/edge computing, serverless computing)
  - Knowledge of Python
  - Skills in Deep Learning frameworks such as PyTorch

- Additional Knowledge and Professional Experience
  - Knowledge in time series modeling
  - Knowledge in Generative AI, specially image generation
- Competences
  - Basic skills on system administration
  - Basic skills in using distributed environments and databases

## Conditions

- The position will be located at BSC within the Computer Sciences Department
- We offer a full-time contract (37.5h/week), a good working environment, a highly stimulating environment with state-of-the-art infrastructure, flexible working hours, extensive training plan, restaurant tickets, private health insurance, support to the relocation procedures
- Duration: Open-ended contract due to technical and scientific activities linked to the project and budget duration
- Holidays: 23 paid vacation days plus 24th and 31st of December per our collective agreement
- 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: 01/09/2024

## 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 a 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](#)

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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