

[208_25_ES_EDD_RE2](#)

Job Reference

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Position

Research Engineer - Python data pipelines engineer (RE2)

Data de tancament

Dimarts, 11 Març, 2025

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Job title: Research Engineer - Python data pipelines engineer (RE2)

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.

We promote Equity, Diversity and Inclusion, fostering an environment where each and every one of us is appreciated for who we are, regardless of our differences.

If you consider that you do not meet all the requirements, we encourage you to continue applying for the job offer. We value diversity of experiences and skills, and you could bring unique perspectives to our team.

Context And Mission

Within the Earth Sciences department, led by Pr Francisco Doblas-Reyes, the Data and Diagnostics Team is involved in different European projects where the design of efficient data pipelines is required. This includes for example the Destination Earth program, the EERIE project, or new calls related to the preparation of data for Artificial Intelligence applications.

The successful applicant will join the BSC Computational Earth Sciences group, within the Earth Sciences Department, to help with the practical implementation of these pipelines to transform the data from the native format (grib, netcdf or CSV) to the format required by the different tools downstream. This includes the technical development of the tool but also their performance analysis and optimization.

This task will be complemented by the support in the writing European proposals in the data pipelines parts.

Key Duties

- Contribute to the development and optimization of data pipelines in DestinE
- Contribute to the development and optimization of data pipelines in EERIE
- Support the writing of the data pipelines tasks in European proposals

Requirements

- Education
 - Having a Bachelor in Computer Science, Telecommunications, Physics or related discipline
- Essential Knowledge and Professional Experience
 - Excellent computing skills in Python and experience with UNIX/LINUX environments and scripting languages (bash,etc)
 - Experience in managing large datasets and Python parallelization
- Additional Knowledge and Professional Experience
 - Knowledge of climate data formats (NetCDF, grib) will be valued
 - Previous experience in scientific software and tools (CDO, CDFTools, ESMValTools, Numpy and Scipy, Xarray,... etc) will be valued
 - Good programming skills to manage big and collaborative projects and experience with git and/or SVN
- Competences
 - Capacity to interact and build strong relations with both climate and computer scientists.
 - Excellent written and verbal communication skills.
 - Ability to take initiatives, prioritize the tasks and work under set deadlines.
 - Ability to work both independently and within a team.
 - Ability to learn and adapt to multiple programming languages easily.
 - Fluency in English, both speaking and writing

Conditions

- The position will be located at BSC within the Earth 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: as soon as possible

Applications procedure and process

All applications must be submitted via the BSC website and contain:

- A full CV in English including contact details
- A cover/motivation letter with a statement of interest in English, clearly specifying for which specific area and topics the applicant wishes to be considered. Additionally, two references for further contacts must be included. Applications without this document will not be considered.

Development of the recruitment process

The selection will be carried out through a competitive examination system ("Concurso-Oposición"). The recruitment process consists of two phases:

- **Curriculum Analysis:** Evaluation of previous experience and/or scientific history, degree, training, and other professional information relevant to the position. - **40 points**
- **Interview phase:** The highest-rated candidates at the curriculum level will be invited to the interview phase, conducted by the corresponding department and Human Resources. In this phase, technical competencies, knowledge, skills, and professional experience related to the position, as well as the required personal competencies, will be evaluated. - **60 points**. *A minimum of 30 points out of 60 must be obtained to be eligible for the position.*

The recruitment panel will be composed of at least three people, ensuring at least 25% representation of women.

In accordance with OTM-R principles, a gender-balanced recruitment panel is formed for each vacancy at the beginning of the process. After reviewing the content of the applications, the panel will begin the interviews, with at least one technical and one administrative interview. At a minimum, a personality questionnaire as well as a technical exercise will be conducted during the process.

The panel will make a final decision, and all individuals who participated in the interview phase will receive feedback with details on the acceptance or rejection of their profile.

At BSC, we seek continuous improvement in our recruitment processes. For any suggestions or comments/complaints about our recruitment processes, please contact