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Job offer

JOB	SPAIN

[Universitat de Barcelona](#) | Posted on: 12 March 2025

Technician research System Administrator – DATATOOLS4HEART

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12 Mar 2025

Job Information

Organisation/Company	Universitat de Barcelona
Department	OPIR
Research Field	Computer science Engineering
Researcher Profile	First Stage Researcher (R1)
Positions	Bachelor Positions
Country	Spain
Application Deadline	26 Mar 2025 - 23:59 (Europe/Madrid)
Type of Contract	Temporary
Job Status	Full-time
Hours Per Week	35
Offer Starting Date	21 Apr 2025
Is the job funded through the EU Research Framework Programme?	Horizon Europe
Reference Number	Nº GA 101057849
Is the Job related to staff position within a Research Infrastructure?	No

Offer Description

We are looking for a highly skilled **System Administrator** to join our team at the **Artificial Intelligence in Medicine lab (**www.bcn-aim.org   **)** to manage and secure our IT infrastructure, including computational clusters, distributed systems, and APIs. The ideal candidate will have expertise in cybersecurity, Python programming, message brokers, and data security. Experience with frontend technologies (React) and GPU server management is a plus. This role requires a proactive individual who can ensure the reliability, performance, and security of our systems while supporting development teams.

We offer:

- A dynamic position in beautiful Barcelona and its Mediterranean climate.
- Research experience within a prestigious university (1st position in Spain).
- Cutting-edge research in AI for healthcare in one of the most dynamic research groups in Europe (10 active projects including an ERC grant).
- An international research environment with a multi-cultural team representing all continents.

- Opportunities to collaborate with international and interdisciplinary collaborators as part of the European projects.
- Flexible working hours, with possibility to telework.

The requirements for the position are:

- Bachelor's degree in Computer Science.
- Proven experience as a System Administrator or similar role in managing distributed systems.
- Strong knowledge of cybersecurity principles, including network security and API protection.
- Proficiency in Python for scripting and automation tasks.
- Hands-on experience with message brokers like RabbitMQ or Kafka.
- Familiarity with database security practices (e.g., SQL injection prevention).
- Ability to troubleshoot complex system issues in high-pressure environments.
- Good team spirit and participation to the lab's scientific life.

Key responsibilities:

System Administration

- Manage and maintain servers, including high-performance computing (HPC) clusters and GPU-accelerated systems.
- Configure, monitor, and optimize distributed systems for scalability and performance.
- Implement system updates, patches, and backups to ensure operational continuity.
- Administer message brokers (e.g., RabbitMQ, Kafka) to support distributed architectures.

Cybersecurity

- Develop and enforce robust security measures to protect sensitive data across systems.
- Monitor for vulnerabilities and implement solutions to mitigate risks (e.g., network anomaly detection).
- Manage secure API integrations with a focus on authentication (OAuth 2.0) and encryption.
- Conduct regular system audits to ensure compliance with security standards.

Development Support

- Collaborate with developers to integrate APIs securely into both backend and frontend applications.
- Optimize server configurations for applications using React or similar frameworks.
- Automate administrative tasks using Python or other scripting languages to improve efficiency.

Data Security

- Ensure the confidentiality, integrity, and availability of organizational data.
- Implement encryption protocols for data in transit and at rest.
- Establish disaster recovery plans to safeguard critical information.

Optional Responsibilities

- Support frontend development teams by ensuring server logic aligns with user interfaces built in React.
- Provide guidance on GPU optimization for machine learning or computational workloads.

Soft Skills

- Strong problem-solving abilities with a focus on proactive solutions.
- Excellent communication skills to collaborate effectively across teams.
- Ability to work independently while managing multiple priorities

The research projects:

You will join our AI for cardiology team, as part of ongoing projects such as DataTools4Heart (https://www.datatools4heart.eu   ) and AI4HF, funded by the European Commission and some coordinated by our lab. In these projects, we are developing new trustworthy AI solutions for personalised medicine approach to tailor the care models in the field of cardiovascular diseases. In particular, we are interested in new AI solutions for risk assessment and patient management. The project will build on a unique set of big data repositories, real-world hospital data, trustworthy AI methods, computational tools and clinical results from major EU-funded projects in cardiology leveraging federated learning. Should you join our team, you will collaborate with several technical and clinical partners within and outside Europe (e.g. in the Netherlands, United Kingdom, Greece, Spain, Belgium, France, Germany, Portugal, Peru, Tanzania, Czechia, Turkey).

The Group:

The successful candidate will join the Artificial Intelligence in Medicine Lab (www.bcn-aim.org   ), which is an integral part of the University of Barcelona's Faculty of Mathematics and Computer Science. It is a young and dynamic research lab, highly active in international projects, and composed of >20 enthusiastic academics, researchers, students and research managers, with expertise in data science, machine/deep learning, biomedical informatics, biomedical ethics, and health-related applications. The research team has an established track record in coordination and participation in national, European and international projects in biomedical data science and medical AI (e.g. EuCanImage, LongITools, HealthyCloud, RadioVal, DataTools4Heart, Youth-GEMs, HappyMums, AIMIX, AI4HF).

The Institution:

The University of Barcelona (UB), founded in 1450, is one of the oldest universities in Spain. It comprises a student body of 84,370 and 4,548 research staff members. With 73 undergraduate programs, 273 graduate programs and 48 doctorate programs, UB is the largest university in Barcelona and Catalonia. The UB is ranked the first Spanish university according to several rankings (QS World University Rankings 2018, ARWU/Shanghai Ranking 2018). It is particularly interested in fostering international relations and, for many years, has managed an average of 150 European projects per year. Since January 2010, Universitat de Barcelona is part of the prestigious League of European Universities Research (LERU).

Gross salary per year: 33.545,30 €.

Where to apply

Website   https://t.ly/3f9bD

Requirements

Research Field	Computer science
Education Level	Bachelor Degree or equivalent

Research Field	Engineering
Education Level	Bachelor Degree or equivalent

Skills/Qualifications

- Bachelor Degree (Computer science, Engineering, etc.)

- Excellent English

Specific Requirements

- Experience with GPU server management for computational tasks or machine learning workloads.

- Knowledge of frontend technologies like React and their integration with backend systems.

- Familiarity with DevOps tools (e.g., Ansible, Docker) for deployment automation.

- Understanding of advanced API security practices (e.g., throttling, quotas).

Languages	ENGLISH
Level	Excellent

Research Field	Computer scienceEngineering
Years of Research Experience	1 - 4

Additional Information

Eligibility criteria

The selection is carried out by means of an interview, in which one or two questions related to the main function to be carried out in the programme or project will be asked. The interview is assessed with an overall score of zero (0) to ten (10). The minimum score to pass is five (5) points. The assessment criteria for the interview are as follows:

- Suitability of the candidate to the main function to be carried out.

- Curricular experience

- Professional knowledge and skills

- Communication skills and motivation.

The selection board will preferably conduct the interview using a suitable online procedure.

Selection process

A resolution of adjudication is issued to the person who, having passed the selection procedure, obtains the highest score and publishes the prioritised list of applicants who have passed the selection process, indicating the scores obtained, for subsequent recruitment, if necessary.

Additional comments

The candidate proposed for hiring must accept the job offer within **5 working days** from the date of notification of the selection.

Priority will be given to people with disabilities (Law 89/2015 of June 2, reserve of quota 2% in favour of people with disabilities in companies of 50 or more people).

Be aware that the starting date sets in this offer is an estimate date. The official starting date will depend on the bureaucratic time that will take the preparation of the labour contract and presentation of the necessary documents to be hired by the selected candidate.

For additional information regards this offer, please, contact: paloma.fernandez@ub.edu

Work Location(s)

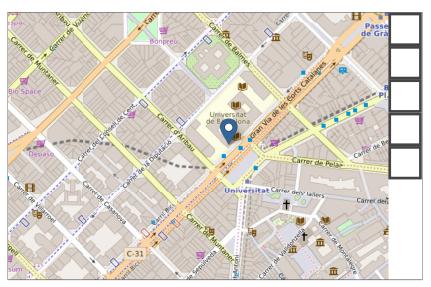|	
Number of offers available	1
Company/Institute	Universitat de Barcelona
Country	Spain
State/Province	Barcelona
City	Barcelona

Postal Code	08007
Street	Gran Via de les Corts Catalanes, 585
Geofield	

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Contact

State/Province	Barcelona
City	Barcelona
Website	https://web.ub.edu
Street	Gran Via de les Corts Catalanes, 585
Postal Code	08007
E-Mail	paloma.fernandez@ub.edu

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