



**PROCEDIMENT DE SELECCIÓ DE PERSONAL INVESTIGADOR POSTDOCTORAL CONTRACTAT A CÀRREC DE FINANÇAMENT FINALISTA O A CÀRREC DE FINANÇAMENT DE POLÍTIQUES DE LA UNIVERSITAT DE BARCELONA (PROCEDIMENT SIMPLIFICAT)**

Euraxess – Job offer

**Mandatory \***

Optional

**Project information**

<b>Acronym*</b>	<b>DataTools4Heart</b>
<b>Project title*</b>	A European Health Data Toolbox for Enhancing Cardiology Data Interoperability, Reusability and Privacy
<b>IP*</b>	<b>Karim Lekadir</b>
<b>Department*</b>	<b>Dept Matemàtiques i Informàtica. Grup:</b> Barcelona Artificial Intelligence in Medicine Lab

**Basic information**

**Job description**

<b>Title*</b>	<b>Postdoctoral position in Barcelona on Artificial Intelligence DataTools4Heart - GA Nº 101057849</b>
<b>Offer description*</b> <i>Project description, responsibilities, functions and/or tasks of the position, etc.</i>	<p>We are offering an exciting postdoctoral position at the University of Barcelona, within the <b>Artificial Intelligence in Medicine lab</b> (<a href="http://www.bcn-aim.org">www.bcn-aim.org</a>), new trustworthy AI solutions for personalised medicine approach to tailor the care models in the field of cardiovascular diseases.</p> <p>Concretely, we offer:</p> <ul style="list-style-type: none"> <li>- A research position in beautiful Barcelona and its Mediterranean climate.</li> <li>- Research experience within a prestigious university (1<sup>st</sup> position in Spain).</li> <li>- Cutting-edge research in AI for healthcare in one of the most dynamic research groups in Europe (12 active projects including an ERC grant).</li> <li>- An international research environment by joining a multi-cultural team representing all continents.</li> <li>- Opportunities to collaborate with international and inter-disciplinary collaborators as part of the European projects.</li> <li>- Support in career development (e.g. grant applications, supervision of PhD students).</li> <li>- Travelling opportunities to scientific events, project meetings and international stays.</li> <li>- Freedom to independently conduct research and contribute with own ideas.</li> <li>- Flexible working hours, with possibility to telework.</li> <li>- Competitive salary equivalent to Assistant or Associate Professor at the University of Barcelona, depending on experience.</li> <li>- Contract duration until the end of the projects (minimum four years), with the possibility to extend the contract as part of other grants within the lab.</li> </ul>



The requirements for the position are:

- Machine/deep learning algorithms.
- Biomedical data science.
- Medical image analysis.
- Excellent programming skills in Python and/or C++.
- Proficient English, both oral and written.
- Enthusiasm about research and medical applications of AI.
- Aptitude to work independently, lead project deliverables and meet deadlines.
- Good team spirit and participation to the lab's scientific life.
- Aptitude to collaborate with local and international project partners (including technical and clinical collaborators).

Furthermore, knowledge in any of the following areas are desirable (but optional):

- Probability and statistics.
- Mathematics and/or applied mathematics.
- Bias detection and correction.
- Transfer learning and domain adaptation.
- Uncertainty estimation.
- Federated learning.
- Bioinformatics and/or Biomedical informatics.
- Biomedical engineering.
- Personalised and/or precision medicine.
- Digital health.

**The research projects:**

You will join our AI for cardiology team, as part of ongoing projects such as AI4HF and DataTools4Heart (<https://www.datatools4heart.eu/>), 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](http://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 >25 enthusiastic academics, researchers, students and research managers, with expertise in data science, machine/deep learning, biomedical informatics, trustworthy AI, and health-related applications. The research group has an established track record in coordination and participation in European and international projects (> 10 million Euros over the last 5 years) in biomedical data science and medical AI (e.g. EuCanImage, euCanShare, EarlyCause, LongITools, HealthyCloud, RadioVal, DataTools4Heart, Youth-GEMs, HappyMums, AIMIX, AI4HF).



	<p><b>The institution:</b></p> <p>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 2022, Shanghai Ranking 2022). It is particularly interested in fostering international relations and, for many years, has managed an average of 150 European projects per year. The University of Barcelona is part of the prestigious League of European Universities Research (LERU).</p>			
<b>Researcher Profile*</b>	<input checked="" type="checkbox"/>	Recognised Researcher ( <i>PhD holder or equivalent, experience more than 4 years, not fully independent</i> )		
<b>Research field*</b> <i>Select one</i>	<input type="checkbox"/>	Agricultural sciences	<input type="checkbox"/>	Educational sciences
	<input type="checkbox"/>	Anthropology	<input type="checkbox"/>	Engineering
	<input type="checkbox"/>	Architecture	<input type="checkbox"/>	Environmental sciences
	<input type="checkbox"/>	Arts	<input type="checkbox"/>	Ethics in health sciences
	<input type="checkbox"/>	Astronomy	<input type="checkbox"/>	Ethics in natural sciences
	<input type="checkbox"/>	Biological sciences	<input type="checkbox"/>	Ethics in physical sciences
	<input type="checkbox"/>	Chemistry	<input type="checkbox"/>	Geography
	<input type="checkbox"/>	Communication sciences	<input type="checkbox"/>	Geosciences
	<input checked="" type="checkbox"/>	Computer science	<input type="checkbox"/>	History
	<input type="checkbox"/>	Criminology	<input type="checkbox"/>	Information science
	<input type="checkbox"/>	Cultural science	<input type="checkbox"/>	Juridical sciences
	<input type="checkbox"/>	Demography	<input type="checkbox"/>	Language sciences
	<input type="checkbox"/>	Economics	<input type="checkbox"/>	Other
	<input type="checkbox"/>		<input type="checkbox"/>	Literature
	<input type="checkbox"/>		<input type="checkbox"/>	Technology
	<input type="checkbox"/>		<input type="checkbox"/>	Religious sciences
	<input type="checkbox"/>		<input type="checkbox"/>	Sociology
	<input type="checkbox"/>		<input type="checkbox"/>	Physiological sciences
	<input type="checkbox"/>		<input type="checkbox"/>	Neurosciences
	<input type="checkbox"/>		<input type="checkbox"/>	Pharmacological sciences
	<input type="checkbox"/>		<input type="checkbox"/>	Mathematics
	<input type="checkbox"/>		<input type="checkbox"/>	Philosophy
	<input type="checkbox"/>		<input type="checkbox"/>	Medical sciences
	<input type="checkbox"/>		<input type="checkbox"/>	Political sciences
	<input type="checkbox"/>		<input type="checkbox"/>	Physics

<b>Gross salary per year*</b>	40.000 €
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### How to apply

<b>Required documents*</b>	Application form (annex 3 optional), Curriculum vitae, motivation letter, etc.		
<b>Send your application to:</b>	<b>Email/website*</b>	<a href="mailto:instanciagenetica@ub.edu">Instancia genérica (ub.edu)</a>	
	<b>Name</b>		
	<b>email subject*</b>	Application – DataTools4Heart Postdoc	

### Working conditions

<b>Type of contract*</b>	Temporary		
<b>Job status*</b> <i>Select one</i>	<input checked="" type="checkbox"/> full-time	<input type="checkbox"/>	<input type="checkbox"/> part-time
<b>Hours per week*</b>	37,5h		
<b>Application deadline*</b>	26/06/2023		<b>Job Starting Date*</b>
			15/09/2023



### Funding

Is the job funded through a EU Research Framework Programme?*		H2020 / Marie Skłodowska-Curie Actions COFUND	FP7 / People-Maire Curie Actions COFUND
		H2020 / Marie Skłodowska-Curie Actions	FP7 / People-Maire Curie Actions
		H2020 / ERC	FP7 / Ideas-ERC
		H2020 / EIT	FP7 / JRC
	X	HE	FP7
If not, indicate the fund program and organization*	Funded by: DATATOOLS4HEART (NºGA: 101057849), HORIZON EUROPE.		
Science4Refugees*			

### Hiring Organisation

Contact Person:	Name	
	email	
	Phone	
	Mobile phone	

### Work location

Department/Centre*	Departament de Matemàtiques i Informàtica, Universitat de Barcelona		
City*	Barcelona		
Street	Gran Via de les Corts Catalanes, 585	Postal Code	08007

### Requirements

Required Education Level* <i>Select one</i>	X	PhD or equivalent
Skills/Qualifications	<ul style="list-style-type: none"> <li>- Machine/deep learning</li> <li>- Predictive modelling</li> <li>- Multi-source data integration</li> <li>- Biomedical or bio-informatics</li> <li>- Excellent programming skills (e.g. in Python)</li> <li>- Excellent English, both oral and written</li> <li>- Ability to independently present results</li> </ul>	
Specific requirements	<ul style="list-style-type: none"> <li>- Good team spirit and participation in the scientific life of the lab</li> <li>- Aptitude to work independently, to lead on project deliverables to co-supervise students, and to represent the lab at meetings and events</li> <li>- Aptitude to collaborate with both technical and clinical collaborators</li> <li>- Passion for applications of artificial intelligence to biomedicine</li> <li>- Strong writing and speaking skills</li> </ul>	
Required languages	Language	Level
	ENGLISH	EXCELLENT



**Additional information**

Website/s for additional job details*	
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**Selection process**

Eligibility criteria*	<p>- PhD in computer science, data science, mathematics, applied mathematics, physics, statistics, biomedical informatics, computer vision, medical image computing, biomedical engineering, or equivalent.</p> <p>- A publication record in relevant peer-reviewed journals and/or conferences.</p> <p>Adequacy of the CV (maximum 60)</p> <ul style="list-style-type: none"> <li>- Specialised doctorate (40), generic doctorate (20)</li> <li>• Letter of motivation (maximum 30)</li> <li>• Experience in the field (maximum 10)</li> </ul> <p>Minimum score to pass the selection process: <b>60/100</b></p>
Selection process	<p>- First selection based on CV and letter</p> <p>- Interviews by a panel composed of Karim Lekadir, team members and academics from the University of Barcelona.</p>

**Additional comments\***

<p><b>Duration of the contract of employment:</b> 12 months.</p> <p>The candidate proposed for hiring must accept the job offer within <b>5 working days</b> from the date of notification of the selection.</p> <p>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).</p> <p>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.</p> <p>For additional information regards this offer, please, contact: <a href="mailto:paloma.fernandez@ub.edu">paloma.fernandez@ub.edu</a></p>
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