

Edgar Garriga | Curriculum Vitæ

Av Vidal i Barraquer – Reus, Spain
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Research Experience

Medesins Sans Frontières

Barcelona, Spain

September - Present '24

ICT Emergency Response Reference. Provide solutions for communication and security in **emergency** and unstable context. Working in projects for **Sudan, Chad, Palestina, and Lebanon**. And emergency response like the floods in **Valencia 2024**. Where the contexts are a dynamic challenge. National and international team using multiple technologies and solutions. Building solutions for field needs and providing the highest standard in **security** and usability.

Field visit: ○ Chad, March 2025: Improve internet connectivity, train ICT supervisor, document and improve the network of the base and projects. Evaluate the infrastructure and propose how to improve it.

○ Sudan, Nov 2024: Train the ICT supervisor, document and improve the infrastructure. Train the team for new security devices. Market assessment and future plans to evolve the infrastructure.

Barcelona Supercomputing Center

Barcelona, Spain

June - September '24

Workflow Management Software Engineer in Earth Science department. Develop the workflow manager Autosubmit in Python for HPC. In charge of deliverables (workflows, provenance) for projects financed by the European Commission, European Digital Twin Ocean EDITO and Destination Earth Climate Digital Twins

Sanger Institute

Hixton, United Kingdom

February - November '22

Senior **Bioinformatician** in the Human Genetics Informatics (HGI) group. Transforming the pipelines of the scientists to **Nextflow** framework. Another task was to improve and refactor pipelines and improve the analysis to increase the **scalability** and the **reproducibility**

Center of Regulation Genomics

Barcelona, Spain

2017-2022

New algorithmic contributions for large scale multiple sequence alignments of protein sequences. The main goal is to implement a new **MSA** algorithm to align large datasets. Another part is developing reproducible pipelines with **Nextflow** and running them in the cloud using **AWS, Docker, or Conda**. I published multiple articles in scientific journals.

Google Summer of Code

Barcelona, Spain

Summer 2018

Implement the support for Research Object specification into Nextflow framework.

I obtained a Google grant to develop the ResearchObject in Nextflow. I was using **Groovy** to add the functionality into the core using **Github** to collaborate with mentors. The developed provenance feature is used in **Nextflow**, and the project was presented at international conferences.

Universitat Autònoma de Barcelona

Barcelona, Spain

September 2017

MSA for the Big Data era.

For the MSc thesis, I implemented an algorithm to perform high-scale MSA. I wrote it in **C/C++** and **Python**, using the container's technology to ensure **reproducibility** and **HPC-Cloud Computing**. I was able to publish an article showing the ability to **align 1.4 million sequences**.

Simpson College

Indianola, USA

December 2016

Creating DNA Libraries Using Thermodynamics and Sequence Alignment Algorithms.

For the Bachelor's undergrad capstone, I did a **web server** in an **international and multidisciplinary team**. The aim was to produce random DNA sequences with a user's specific temperature range. I used **JavaScript** and other web-oriented technologies to build all the required parts.

Politechnika Lodzka

Lodz, Poland

January 2015

Noise Management at EU Airports, Case of Lodz.

On the Erasmus+, the European Project Semester was proposed to perform a study about the noise of the Lodz's airport from a theoretical point of view and performing experiments in an anechoic room. I worked with an **analytical approach** and a practical proposal, using **databases** and the physics of the sound to solve it. A report was delivered with the analysis and the proposed solution, with a campaign to explain the study to the citizens.

Humanitarian Experience

Emergency

Augusta, Italy

RHIB Driver/SAR Logistician Officer

September '23 - March '24

RHIB Driver on the MV LifeSupport and instructor for the SAR team in the central Mediterranean operations. Logistician officer for the Search and Rescue team onboard, setting up the process and improving the system for the search and rescue department.

Medecins Sans Frontieres, OCA

Augusta, Italy

SAR Technician

June-August '23

SAR Technician in the MV Geo Barents for the SAR in the central Mediterranean operations

Emergency

Augusta, Italy

RHIB Driver

March-June '23

RHIB Driver on the MV LifeSupport and rescuer for the SAR in the central Mediterranean operations

SOS Humanity

Burriana, Spain

RHIB Driver

November-January '22/23

RHIB Driver on the MV Humanity 1 for the SAR in the central Mediterranean operations

Salvamento Maritimo Humanitario

Athens, Greece

RHIB Driver

February '20

RHIB Driver on the MV AitaMari for the SAR in the central Mediterranean operations

Refugee Rescue UK

Lesbos, Greece

Volunteer

September-October '19

Lifeguard of the RHIB for the SAR operations in the Aegean sea

Proactiva Open Arms

Barcelona, Spain

Volunteer

December '18

RHIB Skipper in the SV Astral for the SAR in the central Mediterranean operations

Proactiva <i>Coordinator</i> Coordinator of a team of 16 lifeguards in Mataro and skipper of the rescue jetsky	Barcelona, Spain <i>Summer '18</i>
Proactiva Open Arms <i>Volunteer</i> Lifeguard in the vessel Open Arms for the SAR in the central Mediterranean operations	Malta <i>July-August '17</i>
Proactiva Open Arms <i>Volunteer</i> Lifeguard of the RHIB for the SAR operations in the Aegena sea	Lesbos, Greece <i>April-May '17</i>
Protección Civil <i>RHIB skipper, ambulance driver, lifeguard</i>	Cartagena, Spain <i>June'10 - September'12</i>

Education

Pompeu Fabra University <i>PhD in Bioinformatics</i> Center of Regulation Genomics - Bioinformatics and Genomics Group	Barcelona, Spain <i>2017–2022</i>
Autonomous University of Barcelona <i>MSc in Bioinformatics</i> Intern at Center of Regulation Genomics - Bioinformatics and Genomics Group	Barcelona, Spain <i>2016–2017</i>
UNISINOS <i>Computer Science</i> Santander ILA scholarship	Sao Leopoldo, Brazil <i>Spring 2016</i>
Simpson College <i>Computer Science</i> University of Murcia scholarship	Indianola, USA <i>Fall 2015</i>
Politechnika Lodzka <i>Computer Science</i> Erasmus+ scholarship	Lodz, Poland <i>2014–2015</i>
University of Murcia <i>Computer Science,</i>	Murcia, Spain <i>2010–2014</i>

Teaching / Trainer

Nextflow Workshops <i>Online workshop</i> Multiple workshops and tutorials for a diverse audience about Nextflow	Barcelona, Spain
NGSchool <i>Online workshop</i> How to build reproducible and scalable pipelines with Nextflow	Barcelona, Spain <i>Summer '20</i>
Pompeu Fabra University <i>Bachelor in Human Biology</i> Supervisor on a project about selenoprotein annotation	Barcelona, Spain <i>Fall '19</i>
ESCI - Pompeu Fabra University <i>Bachelor in Bioinformatics</i> Teaching algorithms and programming on clustering and Multiple Sequence Alignments	Barcelona, Spain <i>Winter'18 '19 '20</i>

Languages

Spanish/Catalan: Mother tongue

English: Advanced

C1

Italian: Medium

French: Elementary, working on it

Portuguese: Elementary

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**Information Management Systems and
Technology Team**

24th March 2025

Dear Sir or Madam,

I am writing to express my keen interest in the **ICT Senior Assistant** position at your Valencia office. With over a decade of experience in **systems administration and information technologies**, including **humanitarian and emergency contexts**, I believe my profile strongly aligns with the requirements of this role. As an experienced ICT professional with a solid background in emergency response, I am eager to contribute my skills to UNOPS and grow within the organization.

Since September 2024, I have been serving as an **ICT Emergency Response Reference** within MSF's Emergency Unit (OCBA). In this role, I have developed and implemented **ICT solutions for crisis contexts**, including Sudan, Chad, Lebanon, and Palestine. My responsibilities involve ensuring secure and reliable communication in unstable environments, collaborating with national and international teams to tailor technology to operational needs and enhance field efficiency.

Prior to joining MSF, I held various ICT roles, including positions at the Barcelona Supercomputing Center and the Sanger Institute in the UK, where I worked on workflow automation and scalable data processing systems. My expertise spans network security, infrastructure management, and software development, all of which are critical for managing ICT projects in humanitarian operations.

Beyond my technical qualifications, I have extensive experience in humanitarian logistics, team management, and training, particularly in Search and Rescue (SAR) operations in the Mediterranean. Working with organizations such as Emergency, SOS Humanity, and Proactiva Open Arms, I have strengthened my ability to lead teams, solve problems under pressure, and operate effectively in multicultural environments.

I am excited about the opportunity to bring my expertise to the UNOPS team in Valencia. Enclosed is my resume for your consideration, and I would welcome the opportunity to further discuss how my experience can contribute to your mission.

Sincerely,

Edgar Garriga

Please find attached my resume: