

Barcelona, 30th April 2025

Position: ICATMAR & DIGI4ECO Back-End Developer

Place: [Institut de Ciències del Mar \(ICM\)](#), CSIC, Barcelona

Salary: 34.000 - 38.000 € (depending on the candidate profile)

We are opening a selection process for a Back-End Developer to join the ICATMAR and DIGI4ECO team. This is a unique opportunity for a motivated and experienced individual who wishes to further develop their career in marine research information systems.

ICATMAR

The Catalan Institute of Research for the Governance of the Sea ([ICATMAR](#)) is a collaboration organism with management autonomy between the Directorate-General for Maritime Policy and Sustainable Fisheries of the Catalan Government and the Spanish National Research Council (CSIC), through the Institut de Ciències del Mar of Barcelona (ICM). ICATMAR's main objective is to provide quality scientific advice to the Administration and the society.

ICATMAR is carrying out a programme to monitor both recreational and commercial fishing along the Catalan coast, and a programme of observation, analysis and prediction of the physical characteristics of the sea.

DIGI4ECO

DIGI4ECO is a ground-breaking initiative dedicated to unlocking new discoveries and advancements in the management and restoration of marine ecosystems and biodiversity. The project recognizes the critical importance of these ecosystems for both environmental conservation and socio-ecological activities, and we are committed to harnessing digital innovation to address these challenges. At DIGI4ECO, we believe that access to comprehensive biological and oceanographic data is fundamental to effective environmental stewardship. Our project is dedicated to making past, current, and future data accessible to everyone. Through



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innovative tools and methodologies, we will utilize relevant “sleeping” data collected by various institutions, including physical and chemical sensors and video cameras.

Institut de Ciències del Mar – CSIC

The Institut de Ciències del Mar is the fourth largest research institute of the Spanish National Research Council (CSIC) and the largest dedicated to marine research. Under the motto “Ocean Science for a Healthy Planet,” the ICM conducts frontier research and foster both knowledge and technology transfer on topics related to ocean and climate interactions, conservation and sustainable use of marine life and ecosystems, and impact mitigation of natural and anthropogenic hazards. In-depth knowledge, determined action, and coordinated management are essential to confronting these global challenges, thereby driving sustainable development of humankind.

CSIC and all its research centres were awarded with the "[HR Excellence in Research](#)" seal in 2021. This recognition reflects our commitment to continuously improving our human resources policies in line with the [European Charter for Researchers](#) and the [Code of Conduct for the Recruitment of Researchers](#). Recruitment at ICM is open, transparent and merit-based, and all applicants compete on the same terms.

Position

We are looking for a talented Back-End Developer to join the ICATMAR and DIGI4ECO team. This is a unique opportunity for a motivated and experienced individual who wishes to further develop their career in marine research information systems. You will contribute in the design and development of the whole data management workflow of different marine data products and services. More specifically your tasks will include:

- Building reusable code and libraries for future use.
- Integration of multiple data sources and databases.
- Data harmonization and transformation.
- Design, develop, optimise and maintain scalable server-side applications and data storage solutions.
- Providing data to 3rd parties through the development of various API's.
- Collaborate with multidisciplinary and international teams to define, design, and ship new features.

Requirements

- Computer engineering degree or equivalent.
- Proficient knowledge of one or more back-end programming languages (e.g. Python, JavaScript).
- Proficient knowledge of geo-referenced relational databases (PostgreSQL with PostGIS).
- Knowledge of RESTful APIs and web services.
- Knowledge of cloud-based hosting providers like Google Cloud, AWS or Azure Object storage.
- Familiarity with code versioning tools, such as Git or Github.
- Familiarity with Linux operating system and command-line interface.
- Basic understanding of front-end technologies and platforms, such as JavaScript, HTML5, and CSS3
- Bonus: Experience in AI, machine learning, or marine robotics.
- Bonus: Experience with data analysis and visualization with R.
- Bonus: GIS and geospatial data platforms, including QGIS, GeoNode and GeoServer.
- Bonus: Web frameworks or environments such as Django, Node.js and Express.js.
- Bonus: Integration of scientific data servers, such as ERDDAP.
- Bonus: Familiarity with DevOps practices and tools (e.g., Docker, Kubernetes, CI/CD).
- Fluent in English (C1 or similar), Spanish and Catalan.
- Problem-solving attitude, proactive, team player, analytical capabilities and good communication skills.
- For recruitment, it will be necessary to register with the CSIC Job Bank.

Work conditions

We offer:

- Full-time dedication.
- Salary depending on skills, background and experience.
- Possibility of teleworking up to 2 days a week.
- Immediate incorporation.

The contract is financed by the European Union's Horizon Europe programme under grant agreement No 101112883 and the European Maritime, Fisheries and Aquaculture Fund (EMFAF).

The duration of the contract will be 2 years (possibility of extension).



Working environment

Located in Barcelona, the ICM offers an inspiring multidisciplinary environment for marine research professionals facilitating networking opportunities with experts in marine physics, marine geosciences, marine biology, marine chemistry, fisheries and aquaculture management, and technological development. We provide a highly stimulating environment with state-of-the-art infrastructures, and unique professional career development opportunities. The position offers opportunities to attend international conferences and training courses, as well as occasional fieldwork participation in oceanographic and fisheries campaigns.

Contact

Interested candidates, please contact via info@icatmar.cat before **15th May 2025**, with the following information:

- **CV**
- **Cover letter**

Please write the job position in the subject of the email.

The position will be opened until filled.

Providing two names of people who could write a letter of reference in favour of the candidate will be appreciated. All documentation can be submitted in Catalan, Spanish or English.

