

Software Engineer – Australian Ocean Data Network

College/Division	Research Division
School/Section	Integrated Marine Observing System (IMOS)
Location	Hobart
Classification	HEO 7
Reporting line	Reports to Information Infrastructure Team Lead
Date	August 2023

Position Summary

The Integrated Marine Observing System (IMOS) is a national collaborative research infrastructure, supported by the Australian Government. It is operated as an unincorporated joint venture (UJV), with the University of Tasmania as Lead Agent (<http://imos.org.au>). IMOS provides a national, multi-institutional capability to undertake systematic and sustained observing of the marine environment, from the open ocean onto the continental shelf and into the coast, and across physical, chemical and biological variables. IMOS is implemented through a national portfolio of over 60 platform and technology-based Facilities.

All observations undertaken by IMOS produce data streams that are discoverable, accessible, usable and reusable via the Australian Ocean Data Network (AODN). Additional data is incorporated into this network from a wide range of partner organisations including research institutions, federal and state government departments, and private industry.

The AODN is part of the core program delivery within IMOS and provides a single integrated framework for marine data and information management, discovery and access. This infrastructure employs open-source principles and is standards-based, utilising ISO and OGC standards for metadata and data and is hosted on an Amazon Web Services (AWS) platform to deliver information infrastructure for IMOS and the broader community.

The AODN is seeking a motivated and organised Software Engineer with relevant qualifications in computer science, information technology and/or geospatial sciences to work collaboratively within our agile teams to help build and maintain the next generation of web-based, geospatial applications and services of the AODN. This person will provide expertise in system design to support the development of new data-driven systems and the maintenance of existing systems.

The successful candidate should have experience in web-based software development and RESTful APIs, ideally with some experience in the ingestion, management and publishing of geospatial data and experience with AWS cloud services. The position requires excellent communication skills and the ability to build and maintain effective working relationships with staff and collaborators from a wide range of academic and technical backgrounds.

We are an inclusive workplace committed to ‘working from the strength that diversity brings’ reflected in our Statement of Values. We are dedicated to attracting, retaining and developing our people and are committed to inclusive principles. We celebrate the range of diverse assets that gender identity, ethnicity, sexual orientation, disability, age and life course bring. Applications are encouraged from all sectors of the community. Tell us how we can make this job work for you.

What You'll Do

- Build and support geospatial web-based scientific software and information infrastructure hosted on Amazon Web Services (AWS) that underpins the AODN.
- Working with other members of the AODN team on system design, implementation and maintenance as well as protocols and standards for data and metadata ingestion, processing and distribution.
- Design and implement new web-based data management systems – including associated design,

implementation, release planning and data migration activities.

- Work closely with internal (IMOS/AODN) and external stakeholders (domain experts) to perform systems analysis tasks – requirements gathering, user interface and system design.
- Provide support for the AODN data pipelines that ingest, transform and publish high-volume, heterogeneous scientific data.
- Contributing to projects ensuring they are delivered to a high standard with focus on continuous improvement (CI/CD) through task automation.
- Documentation of work done including code, develop manuals for the use of systems and document processes and procedures where appropriate.

What We're Looking For (success criteria)

- Tertiary qualification in Computer Science (or similar) with relevant experience or equivalent extensive experience.
- Well-developed programming skills in Java or Python or web technologies, including design and implementation of REST API's and data processing workflows.
- Experience with relational database systems (such as PostgreSQL) or no-SQL alternatives (such as Elasticsearch).
- Experience working in agile software development teams.
- Methodical approach to software development, including testing, and the documentation of software and systems.
- Detail oriented team player with well-developed written and verbal communications that result in effective and appropriate communication, including the ability to communicate complex concepts clearly and concisely.
- Demonstrated problem-solving skills with ability to take ownership of a complex problem and devise solutions.
- A willingness to learn, grow and adapt to new technologies

Other Desirable Position Requirements

- Experience designing and implementing cloud-based solutions on Amazon Web Services.
- Web application development experience using React and/or CSS frameworks

Applicants are required to address the success criteria in their application.

It is not the intention of the position description to limit the scope or accountabilities of the position but to highlight the most important aspects of the position. The aspects mentioned above may be altered in accordance with the changing requirements of the role.

University of Tasmania

The University of Tasmania is an institution with an enduring commitment to our state and community, and a strong global outlook. We are committed to enhancing the intellectual, economic, social and cultural future of Tasmania. Our [Strategic Direction](#) strongly reflects the University community's voice that our University must be place based but globally connected as well as regionally networked and designed to deliver quality access to higher education for the whole State.

We believe that from our unique position here in Tasmania we can impact the world through the contributions of our staff, students and graduates. We recognise that achieving this vision is dependent on the people we employ, as well as creating a university that is values-based, relational, diverse, and development-focused.

Check out more here:

<https://www.utas.edu.au/jobs>

<https://www.utas.edu.au/careers/our-people-values-and-behaviours>