# Position Details

## Technical Services - CSOF5

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| The following information is for applicants | |
| Advertised Job Title | Software Architect/Engineer |
| Job Reference | 96645 |
| Tenure | Specified Term of 3 years  Full-time, part-time (min. 0.8FTE) |
| Salary Range | AU$110,038 - AU$119,080 per annum (pro-rata for part-time) plus up to 15.4% superannuation |
| Location(s) | Hobart |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian/New Zealand Citizens and Australian Permanent Residents |
| Position reports to the | Group Leader, Scientific Data Systems |
| Client Focus – Internal | 80% |
| Client Focus – External | 20% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Stephanie Zeliadt via email at stephanie.zeliadt@csiro.au or phone +61 3 6232 5091 |
| How to apply | Apply online at <https://jobs.csiro.au/>  Internal applicants please apply via **Jobs Central**  If you experience difficulties when applying, please email [careers.online@csiro.au](mailto:careers.online@csiro.au) or call 1300 984 220. |

**Acknowledgement of Country**

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our [vision towards reconciliation](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

**Child Safety**

CSIRO is committed to the safety and wellbeing of all children and young people involved in our activities and programs. View our [Child Safe Policy](https://www.csiro.au/en/about/policies/child-safe-policy).

### Role Overview

The Engineering and Technology Program (E&T) at CSIRO applies innovative technology to solve complex science challenges. We have identified an opportunity for a talented software architect to undertake software system development in Python to acquire, manipulate, process, and visualise data, which are critical in support of scientific research projects conducted on our research vessel RV Investigator and elsewhere in our technology development portfolio. The successful candidate will be highly productive and effective and be intimately familiar with contemporary software development techniques, including software development methodologies, use of source control, toolchains and libraries, and use industry-standard best practices.

Moreover, the architect will be a role model and software practices advisor within the Program. By advocating for a consistent approach and advising technical staff within the Program, the architect will guide convergence towards best practices. To be a successful advisor, the architect will have broad knowledge of libraries, methods and techniques; and be a willing mentor and an excellent communicator.

### Duties and Key Result Areas

* Research, design, develop, and deploy innovative software products that support E&T’s technology innovation delivery.
* Develop supporting systems and applications to establish and improve DevOps capability and practices, including implementing test cases and reviewing code changes to manage and implement software projects.
* Liaise collaboratively with internal and external stakeholders to determine software engineering priorities within E&T and create a roadmap for software projects delivery.
* Consult with other technical staff to develop a set of standard guidelines for E&T software project management and software development.
* Be proactive, approachable and available for others seeking advice on best approaches and practices, both technical and methodological.
* Communicate effectively and respectfully with all staff, clients, and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. Tertiary Degree in Information Technology, Computing, Computer Science and/or equivalent experience; including extensive experience in designing, developing and implementing software solutions.
2. Proven experience in best-practice software design and development methodology, including (for example) Agile, DevOps, use of version control, automated testing and build systems.
3. Highly developed skills in Python, including common data science libraries such as NumPy, Pandas, dask, scipy or xarray.
4. Demonstrated high level project management skills, including the ability to work with a range of stakeholders to mutually agreed software engineering outcomes.
5. Demonstrated ability to champion, drive and evolve software engineering principles and practices within an organisation, including writing maintainable, scalable, production quality code.
6. Ability to analyse business requirements and write proposals for a range of stakeholders including governance committees.
7. Demonstrated ability to create technical documentation regarding software systems, such as system design, requirements, and user and development guides, appropriate to the intended audience.
8. Demonstrated ability to develop and meet goals, working under limited direction to specific deadlines, and to work effectively as part of a team.
9. Demonstrated experience leading teams in the design, development, and maintenance of software systems with evolving constraints.

## **Desirable**

1. Demonstrated experience working in a scientific field, particularly marine science.
2. Experience with building and developing client relationships.
3. Experience with database design using enterprise scale relational databases (e.g. Oracle, PostgreSQL or equivalent).
4. Demonstrated experience in one or more web technologies, such as React, Angular, Django, FastAPI, Flask, NodeJS.
5. Experience with UI/UX and API design for geospatial, spatio-temporal and/or sensor data.

## **Required Competencies**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others reactions.
* **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
* **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.
* **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

Special Requirements

Appointment to this role is subject to provision of a pre-employment background check and may be subject to other security/medical/character clearance requirements.

* The successful candidate will undertake a pre-employment background check. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* This role may provide opportunities to work at sea on RV Investigator. The successful applicant will be required to obtain a seagoing medical prior to working at sea.

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [National Collections and Marine Infrastructure - CSIRO](https://www.csiro.au/en/about/people/business-units/NCMI) for more information.

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* People First
* Further Together
* Making it Real
* Trusted