# Position Details

## Research Projects- CSOF5

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| The following information is for applicants | |
| Advertised Job Title | Senior Software Engineer (2 roles) |
| Job Reference | 68788 |
| Tenure | Role 1: Specified Term of 2 years  Role 2: Specified Term of 3 years |
| Salary Range | \*CSOF5:AU$98,735 to AU$106,848 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Kensington, WA preferred, Sydney, Melbourne and Canberra can also be considered |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian/New Zealand Citizens and Australian Permanent Residents Only |
| Position reports to the | Research Team Leader, Dr Pavel Golodoniuc/Dr Jens Klump |
| Client Focus – Internal | 30% |
| Client Focus – External | 70% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Dr Pavel Golodoniuc via email: Pavel.Golodoniuc@csiro.au  *Please do not email your application directly to Dr Pavel Golodoniuc. Applications received via this method will not be considered.* |
| 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. |

### Role Overview

The role of Research Projects staff in CSIRO is to collaborate in scientific activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental and observational work, and in carrying out the more practical aspects of the work. Research Projects staff may be involved in providing services, research science collaboration or management and/or industry liaison.

The Discovery Program is seeking to recruit two Senior Software Engineers to support its increasing participation in data analytics in the resources sector. The Program develops software technologies to aid in characterising mineral resources and minerals exploration. The Program has a need for software engineers that can support this work by working with geoscientists and data scientists to design and maintaining operational IT systems in conventional, HPC and Cloud environments across the work portfolio and ensure quality for internal operations and support customer demand.

### The successful candidates will work in multi-disciplinary teams and will play a role in the design and development of IT systems to support analytical algorithms and their integration with scientific workflows. They will be involved in innovative projects and gain exposure to cutting-edge technology and assist in taking a concept through to operational system with a key focus on systems quality for industry use. In addition, the successful candidate may be required to work in collaboration with our industry partners to socialise CSIRO technologies or help implement them into their workflows. They will be required to present their work through provision of both in-house and external workshops, presentations at conferences and contribution to journal articles and reports in order to communicate findings to the minerals community, particularly within Australia. This may also involve networking at industry-focussed events and conferences.

### Duties and Key Result Areas:

* Play a key collaboration role between geoscientists, data scientists and software engineers and the creation of robust operational systems from research outcomes.
* Derive and communicate effectively technical requirements with an emphasis on systems architecture and implementation both with CSIRO and to our industry and government partners.
* Convey research ideas and scientific requirements into a technical development plan.
* Take research code/systems and engineer into robust systems suitable for routine client use.
* Actively contribute towards strategic development.
* Routinely maintain the high quality of the developed software using continuous integration, testing and deployments tools.
* Document software and algorithms and provide user training through regular meetings and workshops.
* Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work as part of a multi-disciplinary, often regionally dispersed research team, to carry out tasks autonomously in support of scientific research.
* Work collaboratively with colleagues within your team, the business unit and across CSIRO, to reach objectives.
* Choose appropriate management strategies and communication styles to maintain high levels of motivation and productivity, give feedback for development purposes and provide support and direction for improvement, as required.
* Adapt and/or develop original experimental methods/equipment/ software/concepts/ideas in support of existing and further research.
* 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.

## **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 other 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:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **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.

## **Selection Criteria**

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

***Essential Criteria:***

1. A relevant Bachelors (Hons) Degree and/or at least 5 years of working experience in computer science, software engineering or related discipline.
2. Evidence of conceptual thinking in domain models, UI components, and contribution to design and implementation of elegant but comprehensive API.
3. Experience using one or more of the following languages/frameworks: Angular, TypeScript, NodeJS, Bootstrap, Python, Java, Docker, Terraform. If you are experienced in other languages/frameworks we still encourage you to apply and we will train you in our technologies. Please provide a link to your open repositories if possible.
4. Excellent skills in converting research software systems into operational systems for use by external clients.
5. Demonstrated experience in scientific software and algorithms development, ability & willingness to contribute novel ideas and approaches in support of scientific investigations.
6. Experience with software industry development practices, including planning, continuous integration, continuous testing, and deployment.
7. The ability to work effectively as part of a multi-disciplinary, regionally dispersed research team, and carry out tasks autonomously in support of scientific research.

**Desirable Criteria:**

1. Experience in web front-end development and testing frameworks.
2. Demonstrated Cloud technology experience – AWS, GCP, Azure, OpenStack, load balancing, security, etc.
3. An interest in data visualisation and machine learning.

## **Special Requirement:**

The successful candidate will be asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits

## **About CSIRO:**

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