# Position Description

## Research Scientist/Engineer – CSOF5

The following information is for applicants

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| Advertised Job Title**:** | Senior Software Engineer |
| Job Reference: | 59423 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | Australian Citizens Only  Australian/New Zealand Citizens and Australian Permanent Residents Only   * All Candidates |
| Percentage of Client Focus - Internal: | 50% |
| Percentage of Client Focus - External: | 50% |
| Reports to the: | Team Leader Geoscience Analytics |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries | Dr Jens Klump via email: [jens.klump@csiro.au](mailto:jens.klump@csiro.au) or phone: 08 6436 8828 |
| Contact Details For Applying | Call 1300 984 220 or email [careers.online@csiro.au](mailto:careers.online@csiro.au). |
| How to Apply: | Please apply online at [jobs.csiro.au](https://jobs.csiro.au/) and enter the requisition number**.** Internal applicants please apply via ‘Jobs Central’ through the ‘People Hub’ icon |

## Role Overview:

The role of Research Scientist Staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

The Software Engineer is required to support The Discovery Program in 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 Software Engineer will design and maintain operational IT systems in conventional, HPC and Cloud environments across the work portfolio and ensure quality for internal operations and support customer demand.

The role will sit in a multi-disciplinary team of geologists and software engineers, and will contribute to the design and development of IT systems to support analytical algorithms and their integration with scientific workflows. The Software Engineer will be involved in innovative projects and gain exposure to cutting-edge technology, and also assist in taking concept through to operational system with a key focus on systems quality for industry use.

## Duties and Key Result Areas:

* Play a key collaborator role between geoscientists and software engineers for the creation of robust operational systems from research outcomes.
* Derive and effectively communicate technical requirements with an emphasis on systems architecture and implementation.
* Convey research ideas and scientific requirements into a technical development plan.
* Take “proof-of-concept” code/systems and engineer into robust systems suitable for routine client use.
* Actively contribute towards strategic development.
* Routinely maintain 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.
* Establish sound engineering frameworks to support code development (i.e., continuous integration, build systems etc.).
* 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.

## Competencies:

1. **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.**
2. **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.**
3. **Resource Management/Leadership: Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.**
4. **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
5. **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.**
6. **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 selection criteria can be appointed.*

1. A relevant Bachelor’s Degree and at least 5 years of working experience in computer science, software engineering or related discipline, particularly in Python, Java and web development technologies.
2. Demonstrated track record in systems architecture/engineering.
3. Excellent skills in converting proof of concepts into operational systems for use by internal or external clients.
4. Demonstrated ability in integrated data systems, high performance data, and data management as well as the ability to solve problems under limited guidance and according to set objectives.
5. Demonstrated experience in scientific software and algorithms development.
6. Experience with software industry development practices, including planning, continuous integration, continuous testing and deployment.

## Desirable Criteria:

1. Experience in web front-end development and testing frameworks.
2. Demonstrated Cloud technology experience – AWS, OpenStack, load balancing, security, etc.

## About CSIRO:

We imagine. We collaborate. We innovate. To find out more visit us [online](http://www.csiro.au/)!

Find out more about CSIRO [Mineral Resources](https://www.csiro.au/en/Research/MRF)