# Position Description

## Research Projects – CSOF4

The following information is for applicants 

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| Advertised Job Title**:** | Software Engineer - C++ Application Development |
| Job Reference: | 61491 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | Australian/New Zealand Citizens and Australian Permanent Residents Only |
| Number of Direct Reports: | 0 |
| 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 Damien  |
| Contact details to discuss this position: | Damien Watkins via email: Damien.Watkins@csiro.au*Please do not email your application directly to Damien Watkins. Applications received via this method will not be considered.*  |
| If you have difficulty applying please contact: | Call 1300 984 220 or email csiro.online@csiro.au between 8.30 am and 5 pm Australian east coast time. |

## Role Overview:

Research Projects staff in CSIRO collaborates in scientific and technological activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental, observational or technology development work, and in carrying out the more practical aspects of the work. Research Projects staff may be involved in providing consulting services, science management and/or industry liaison.

The Software Engineer will join the Computational Software Engineering and Visualisation Team (CSEV) within Data61 at CSIRO. The Engineer will be part of a multi-disciplinary team of software engineers and scientists that produce advanced scientific software for real-world applications. To support the development of such applications, the CSEV Team develops world-leading scientific application development frameworks for use both inside and outside CSIRO. One such framework is Workspace: a cross-platform framework designed to enhance productivity, enable collaboration and software reuse and to facilitate the distribution and commercialisation of software products. Our software framework has an object-oriented architecture and uses modern C++ facilities such as templates and lambda expressions.

## Duties and Key Result Areas:

* Development of commercial-quality software using C++ and building upon our software frameworks, for deployment both inside and outside of CSIRO.
* Contribute to the code-base daily.
* Be responsible for developing high-quality applications using our software infrastructure for deployment into research and commercial environments.
* Compile, execute, profile and debug code on multiple platforms (including Windows, Linux and Mac), and use software engineering best-practices, such as version control, continuous integration, automated test suites and work item tracking software during daily activities.
* Active involvement (as required) in all aspects of the software development lifecycle. This will include requirements gathering and specification, design, development, testing and delivery of applications, components and tools. Ongoing support of these applications, components and tools will also be required.
* Engage end-users and customers to elicit, refine and document software requirements and project objectives, and provide end-user support as required.
* Have a professional and proactive view of their software engineering career.
* Work in multi-disciplinary, geo-distributed teams to carry out tasks autonomously in support of scientific research.
* Work collaboratively with colleagues within your team, Data61 and across CSIRO to achieve objectives.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary, often regionally dispersed research team, and business unit to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, 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: Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).**
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. Relevant tertiary qualification or equivalent experience in Software Engineering or Computer Science.
2. Commercial programming experience in C++.
3. Experience in software development processes and software development systems. In particular, demonstrated experience of working in a test-driven, agile development or continuous integration environment is necessary.
4. Experience with the following software utilities:
	1. Source code repositories (e.g. SVN/Git),
	2. Work item tracking (e.g. JIRA/TFS),
	3. GUI libraries (e.g. Qt/MFC),
	4. Cross platform build systems (e.g. CMake).
5. The ability to work effectively as part of a multi-disciplinary, regionally dispersed research team, and carry out tasks under general direction from Scientific Researchers.
6. The ability & willingness to contribute novel ideas and approaches in support of scientific investigations.

## Desirable Criteria:

1. Experience developing software on multiple platforms.
2. Experience developing modern web applications or user interfaces.

## About CSIRO:

At CSIRO we solve the greatest challenges through innovative science and technology. See more [online](http://www.csiro.au/)!

**CSIRO Data61** In today’s data-focused world, there’s no doubt that numbers count. [**Data61**](http://www.data61.csiro.au/) are the largest data innovation group in Australia, a connector that brings together technology innovators, businesses and universities to transform Australian industry and to help solve our greatest challenges. A CSIRO business, we are creating our data-driven future.