# Position Details

## Research Projects- CSOF4

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| The following information is for applicants | |
| Advertised Job Title | Software Engineer |
| Job Reference | (to be entered by your Recruitment Consultant) |
| Tenure | Specified Term of 36 months  Full-time |
| Salary Range | AU$85,361 to AU$96,573 pa + up to 15.4% superannuation |
| Location(s) | Pullenvale |
| 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 | Team Leader |
| Client Focus – Internal | 20% |
| Client Focus – External | 80% |
| Number of Direct Reports | 0 |
| Enquire about this job | Jeremy Thompson via email [jeremy.thompson@csiro.au](mailto:jeremy.thompson@csiro.au)  +61 7 3327 4769 |
| 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 Mining Technologies Research Group (MTRG) is one of Australia’s largest mining research groups and has a goal of delivering transformational change to the mining industry. MTRG has developed a number of world-first technologies for the Australian and International mining industry. This includes the LASC system for underground coal longwall mining automation as well as systems for continuous miner automation, roadheader automation and coal seam sensing and characterisation.

MTRG is seeking a Research Projects Software Engineer to join their Automation Technology team. 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.

This role has been created to provide software engineering support across the suite of existing and emerging projects being undertaken by the Mining and Processing Technologies Research Group. This role will cover a wide range of activities, including software development, documentation, sensor data analysis, algorithm development, system design and integration.

### Duties and Key Result Areas:

* Provide high level software engineering capability for new and existing project applications across the research group.
* Make significant contributions to the interpretation and communication of research or technological results and may collaborate on drafting presentations to, and/or detailed written reports for, clients and the scientific and/or technology community.
* Under general direction participate in planning projects and accept responsibility for the scheduling and completion of major parts of projects, including allocating and directing tasks where appropriate.
* On activities pertaining to the immediate work area and responsibilities, allocate activities, direct tasks and manage resources to meet objectives, as required.
* Adapt and/or develop original experimental methods/equipment/software/concepts/ ideas in support of existing and further research, promptly addressing where methods may not be defined and initiative is required in seeking new approaches to meet experimental and/or technological needs.
* 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 procedures and policy, Diversity initiatives and Making Safety Personal 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 others reactions.
* **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.
* **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**

#### Essential

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

1. Relevant diploma/bachelor’s degree or equivalent relevant experience in Software Engineering.
2. Demonstrated Software Engineering proficiency.
3. Strong proficiency in C++.
4. Experience with software development using the Qt framework.
5. Experience designing and developing software in an industrial automation setting.
6. Experience with field trials of remote controlled research test equipment, including precision data acquisition and results analysis.
7. A history of professional and respectful behaviours and attitudes in a collaborative environment.
8. The ability to work effectively as part of a multi-disciplinary research team comprised of both internal and external collaborators in a regionally dispersed setting.

## **Desirable:**

1. Experience with Linux operating systems including in embedded environments.
2. Experience with software development for microprocessors (PSoC, Atmel etc).
3. Experience with UI/UX development.
4. Experience with designing software for augmented reality and assistive technology systems.
5. Experience with laser based sensing technologies.
6. Experience with development of software automation components for industrial and robotic control systems.

Special Requirements

Appointment to this role may be subject to conditions including provision of a national police check as well as other security/medical/character clearance requirements.

Where required by the demands of specific project responsibilities, you must be willing and able to:

* Undertake work out of normal workday hours, including after-hours and weekends.
* Undertake field work to mine sites and other remote locations.
* Undertake field work in underground environments including coal and/or hard rock underground mines.

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