# Position Details

## Research Projects- CSOF3

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| The following information is for applicants | |
| Advertised Job Title | Mining Software Engineer |
| Job Reference | 67424 |
| Tenure | Specified Term until 1 June 2023  Full-time |
| Salary Range | AU$63,594 to AU$80,937 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Pullenvale QLD |
| 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: Mining Optimisation |
| Client Focus – Internal | 0% |
| Client Focus – External | 100% |
| Number of Direct Reports | 0 |
| Enquire about this job | Dr Ewan Sellersvia email: [Ewan.Sellers@csiro.au](mailto:Ewan.Sellers@csiro.au) or phone: +61 7 3327 4444 |
| 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

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.

### The role of the Mining Software Engineer is to work closely with software engineers, researchers and industry collaborators to build embedded systems, mine optimisation and material physics software for the mining and mineral processing industry. The role is to produce innovative software for commercial and industrial customers. As part of the Mining Optimisation team, the incumbent will develop the technical design of the software and apply C, C++ and Python code to create software for applications including exploration drill data, mine architecture, mine block models, mine sensing, material provenance and mill process information. They will also aid in the development and implementation of mining and mineral processing value chain models as part of the system.

### Duties and Key Result Areas:

* Develop software and embedded systems building on Mining3’s research in areas such as mine sensing, mine design, mineral analysis, optimisation and automation.
* Perform software and system design activities where needed.
* Follow and implement recognised software engineering best practices including documentation, test-driven development and automation for ensuring software quality, performance, accessibility, maintainability and reusability.
* Work collaboratively with project team members and others across Mining3 and CSIRO to ensure that project goals and Mining3 goals are achieved.
* Contribute to Mining3’s engineering discipline by improving use of software development tools, practices and culture.
* Maintain high ethical and performance standards.
* 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:** Proactively seeks and considers the ideas and opinions of others from within and outside the team to help form decisions, plans or actions.
* **Influence and Communication:** Puts forward ideas by presenting factual information supported by data, definitions, examples, illustrations or other aids, which will assist in conveying meaning.
* **Resource Management/Leadership:** Provides instruction and assists other staff to complete allocated tasks and activities.
* **Judgement and Problem Solving:** Identifies and considers the implications of a range of available alternatives in order to select the most appropriate response to problems of a familiar or recurring nature.
* **Independence:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **Adaptability:**Willingness to change ideas or perceptions based on new information, contrary evidence or other people's points of view. Prepared to try out different approaches.

## **Selection Criteria**

#### Essential

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

1. Relevant Bachelors/Masters Degree &/or equivalent experience in Electrical/Electronics Engineering.
2. Ability to code in C and Python.
3. 1 -2 years of experience in Mining software development.
4. Experience in Embedded systems development for Mining applications e.g. sensor systems.
5. Experience in the application and coding of optimisation techniques to mining problems.
6. Knowledge of the mining value chain.

**Desirable:**

1. Additional software languages such as C++.
2. Training in project management and software development processes.

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.

* 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.
* The successful candidate will be required to undertake a medical examination required by mine sites prior to commencement.
* The successful candidate must hold or be able to obtain the Std 11 or other induction and safety qualifications as required.
* The successful candidate must be willing and able to travel to remote locations for up to two to three weeks at a time.

## **About CSIRO:**

We solve the greatest challenges through innovative science and technology. 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)