# Position Details

## Research Projects- CSOF3/4

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| The following information is for applicants | |
| Advertised Job Title | Robotics Software Engineer |
| Job Reference | 64298 |
| Tenure | Specified Term of 3 years |
| Salary Range | \* CSOF3 AU$63k – AU$80k plus up to 15.4% superannuation  \* CSOF4 AU$83K - AU$94K plus up to 15.4% superannuation  \*NB: This position is offered across two levels, the appointment level will be determined by the qualifications, skills and relevant experience of the successful candidate |
| 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 | Software Team Lead |
| Client Focus – Internal | 70% |
| Client Focus – External | 30% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Kazys Stepanas via email at [kazys.stepanas@csiro.au](mailto:kazys.stepanas@csiro.au)  *Please do not email your application directly to Kazys Stepanas. 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

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 Robotics Software Engineer will specialise in software development of SLAM (Simultaneous Localisation And Mapping) software and algorithms, assisting in ongoing support and development of world leading SLAM technologies within the Cyber Physical Systems program. The Engineer will fill a critical role within this multi-skilled and highly motivated Robotics and Automated Systems software team. The role offers highly rewarding work with research scientists and engineers working on world leading research and robotics systems.

**Duties and Key Result Areas:**

* Develop high-quality software
* Research and develop improvements to SLAM algorithms
* Investigate, diagnose and debug technical issues and implement solutions as guided by more senior staff.
* Follow appropriate processed and procedures for managing client issues and identify process improvements.
* Respond courteously and efficiently to client requests, maintaining clear communication regarding mutual expectations and monitoring client satisfaction.
* Undertake and complete tasks under technical direction, working with discretion to decide on the timing of operations within the work team’s plan and planning ahead to meet experiment and/or project demands.
* Under technical direction, undertake experiments, laboratory analyses or technology development activities (some non-routine) using a range of techniques, often working on a number of parallel and competing tasks.
* 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.

**For an appointment at the higher salary level (CSOF4), duties will also include:**

* Investigate, diagnose and debug technical issues in order to identify and implement viable solutions.
* Design new processes or algorithms by adapting existing techniques and components to meet special circumstances or undertake modifications to methods requiring some innovation.
* Participate in project planning and scheduling based on client needs, including allocating and directing tasks where appropriate.

## Required Competencies:

**CSOF 3**

* **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.**

**CSOF 4**

* **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 trade certificate/diploma/bachelor’s degree and/or equivalent work experience in software engineering, science or mathematics.
2. Strong C/C++ software development experience
3. Strong mathematics skills, especially linear algebra.
4. High level oral and written communication skills.
5. Ability to work independently.

**For an appointment at the higher (CSOF4) salary level, as well as satisfying the Essential Criteria listed above, you must also have:**

* 2+ years’ C/C++ experience.
* Demonstrated experience in 2 or more of the following:
  + SLAM algorithms
  + Linux based operating systems
  + Real-time software development
  + ROS; Robots Operating System
  + Machine vision and image processing
  + DevOps and Docker deployment

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.

## **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 [Data61](https://www.data61.csiro.au/)