# Position Details

## Research Projects- CSOF6

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| The following information is for applicants | |
| Advertised Job Title | Robotics Software Engineer – SLAM R&D |
| Job Reference | 90989 |
| Tenure | Indefinite, Full-time |
| Salary Range | AU$ 121,455 - AU$ 142,321 per annum (pro-rata for part-time)  plus up to 15.4% superannuation |
| Location(s) | Pullenvale, Queensland |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Robotic Software Team Leader |
| Client Focus – Internal | 80% |
| Client Focus – External | 20% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Jason Williams via email at jason.williams@data61.csiro.au. |
| 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. |

**Acknowledgement of Country**

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our [vision towards reconciliation](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

### Role Overview

The role of Research Projects staff in CSIRO is to collaborate 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. At senior levels, Research Projects staff may be involved in providing consulting services, science and technology management and/or industry liaison.

This position is for a senior software engineer to design and develop software in the Robotics and Autonomous Systems (RAS) Group. The role will focus on the research and development of new capabilities and improvements to CSIRO’s *Wildcat SLAM* 3D mapping and localisation software platform.

### Duties and Key Result Areas

The successful candidate will be required to work closely with robotics researchers and other engineers to enhance the Wildcat SLAM platform, which will involve:

* Researching, adapting and implementing algorithms for the Wildcat platform that provide new and enhanced capabilities, functionality and performance
* Gathering and synthesising technical requirements from internal and external stakeholders to inform development planning
* Working closely with the engineering team to implement test and enhance algorithms within the platform framework
* Providing technical assistance to internal and external users where deeper technical understanding is required to resolve issues or queries
* Staying up to date with the latest SLAM research, trends and results in academia and industry and identifying opportunities to adopt and adapt approaches for the Wildcat platform
* Contributing to relevant scientific and technical publications
* 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 research team to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## **Selection Criteria**

#### Essential

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

1. Relevant trade certificate/diploma/bachelor’s degree or equivalent relevant work experience in software engineering or similar
2. Demonstrated experience developing and testing high performance SLAM algorithms
3. Strong C++ development skills

## **Desirable**

1. Track record of research publication on SLAM
2. Demonstrated ability to identify and resolve complex technical issues with limited information
3. Experience developing within software frameworks
4. Hands-on experience with field-testing and data gathering

## **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 team as well as industry colleagues.
* **Influence and Communication:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious, proposals / ideas.
* **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
* **Judgement and Problem Solving:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Demonstrates flexibility in thinking and adapts to and manages the increasing rate of organisational change by adjusting strategies, goals and priorities.

Special Requirements

* The successful candidate will be asked to obtain and provide evidence of a National Police Clearance or equivalent. Please note that individuals 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. Visit [CSIRO Online](http://www.csiro.au/) and [CSIRO's Data61 Business Unit](https://data61.csiro.au/) for more information.

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* People First
* Further Together
* Making it Real
* Trusted