# Position Details

## Research Projects- CSOF4

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| The following information is for applicants | |
| Advertised Job Title | Robotics Software Engineer - SLAM |
| Job Reference | 73578 |
| Tenure | Specified Term of 18 months (+ potential opportunity to spin out)  Full-time |
| Salary Range | AU$83,687 to AU$94,679 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Pullenvale, QLD; flexible work from home arrangements available |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian Citizens and Permanent Residents currently residing in Australia * New Zealand Citizens currently residing in Australia * Australian temporary residents who are currently residing in Australia and have the right to work for the expected duration of the term (at least to end of approx. Dec 2022), with no requirement for sponsorship |
| Position reports to the | Wildcat Team Leader |
| Client Focus – Internal | 10% |
| Client Focus – External | 90% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Fred Pauling via email at fred.pauling@csiro.au or phone +61 7 3327 4049 |
| 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 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.

[Wildcat](https://data61.csiro.au/en/Our-Research/Our-Work/Monitoring-the-Environment/Visualising-the-world/Wildcat-SLAM) is CSIRO’s most advanced Simultaneous Localisation and Mapping (SLAM) software that enables teams of robots to collaboratively map and explore unknown environments, and it provides best in class 3D mapping and localisation for survey, inspection, patrol and response applications. The SLAM Engineer will be part of the Wildcat team and will directly contribute to the development of new Wildcat SLAM features, enhancements and related tools and technologies, to prepare for fully commercialising the technology. The successful candidate will also benefit from use of CSIRO’s world-class robotics research infrastructure and state of the art equipment and will build a strong network with world-leading roboticists through CSIRO and our partners. Subject to performance, the successful candidate would be offered a role in a potential [spinout](https://data61.csiro.au/en/Our-Network/Spinouts) company.

### Duties and Key Result Areas

* Develop high quality C++ and Python code that implements new features, improvements and tools on top of Wildcat SLAM.
* Test and validate software on existing and new datasets, including working with CSIRO and / or customers to specify and assist with data collection activities.
* Configure Wildcat to accommodate novel sensor configurations for a variety of applications.
* Where required, liaise with clients to determine their needs and take personal responsibility for their satisfaction.
* Address problems promptly and in a constructive manner.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Making Safety Personal goals.
* Other duties as directed.

## **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 work experience related to software engineering / software development, plus at least six months of industry experience.
2. Demonstrated skill and experience developing well-engineered C++ software in a team setting.

## **Desirable**

1. Experience developing, using, configuring, modifying and debugging SLAM methods and algorithms (e.g., lidar and/or visual).
2. Demonstrated experience developing software to handle, process and transform 3D data (e.g., from lidar).
3. Ability to analyse, visualise and otherwise interpret data and data logs to solve issues and guide technical development.
4. General experience and knowledge in field robotics – especially perception algorithms.
5. Experience with Robot Operating System (ROS).
6. Experience developing with Python.
7. Significant experience developing software in an industry setting.
8. Experience with large-scale software development practices, including PRs, CI/CD, release cycles, etc.

## **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.

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 b 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.

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We solve the greatest challenges through innovative science and technology. To find out more visit us [online](http://www.csiro.au/)!

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

* 1. People First
  2. Further Together
  3. Making it Real
  4. Trusted

Find out more about CSIRO [Data61](https://data61.csiro.au/)