# Position Details

## Research Projects – CSOF5

The following information is for applicants

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| Advertised Job Title**:** | Software Engineer |
| Job Reference: | 66583 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | Australian/New Zealand Citizens and Australian Permanent Residents Only |
| Percentage of Client Focus - Internal: | 30% |
| Percentage of Client Focus - External: | 70% |
| Reports to the: | Software Team Leader |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries: | Kazys Stepanas – kazys.stepanas@csiro.au  *Please do not email your application directly to Kazys Stepanas. Applications received via this method may not be considered by the selection panel.* |
| Contact Details For Applying: | Call 1300 984 220 or email [careers.online@csiro.au](mailto:careers.online@csiro.au). |
| How to Apply: | Please apply online at [jobs.csiro.au](https://jobs.csiro.au/) and enter the requisition number**.** Internal applicants please apply via ‘Jobs Central’ in SAP (click ‘Recruitment’) |

## Role Overview

Research Projects staff in CSIRO 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. Research Projects staff may be involved in providing consulting services, science management and/or industry liaison.

We are looking for a Robotics Software Engineer specialising in point cloud processing algorithms for ongoing support and development and support of algorithms based on the world leading SLAM technologies within the Cyber Physical Systems program. The successful application 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.

The successful candidate will have strong C/C++ software engineering experience, experience in data processing algorithms especially point cloud base algorithms, good mathematics skills especially with respect to linear algebra, and software engineering skills in areas such as communication protocols, algorithm development, machine vision, image processing and/or real time software development. The

successful candidate should also have experience with client interactions, embedded software development and the Robotics Operating System (ROS).

## Duties and Key Result Areas:

* Develop high-quality software
* Research and develop improvements to SLAM algorithms
* Enhance the API and customer experience with SLAM and related technologies.
* Interact with customers to help investigate, diagnose and debug technical issues in order to identify viable solutions as well as enhancing existing APIs.
* Follow appropriate processed and procedures for managing client issues and identify process improvements.
* Participate in project planning and scheduling based on client needs, including allocating and directing tasks where appropriate.
* Communicate openly, effectively and respectfully with all staff 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 plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## Essential Criteria:

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

1. Relevant trade certificate/diploma/bachelor’s degree or equivalent work experience in software engineering, science or mathematics
2. Strong C/C++ software development experience (2+ years’ experience preferred)
3. Experience with point cloud processing algorithms
4. High level of oral and written communication skills
5. Experience with embedded Linux software development
6. Experience developing autonomous systems using ROS
7. Good python programming experience
8. Ability to work independently

## Desirable Criteria:

1. Prior experience with SLAM algorithms
2. Real-time software development experience
3. Experience with ROS; Robots Operating System
4. Machine vision and image processing experience
5. DevOps and Docker deployment
6. Good mathematics education and/or experience

## About CSIRO:

At CSIRO we solve the greatest challenges through innovative science and technology. See more [online](http://www.csiro.au/)!

## Special 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.