**Position Description**

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| Advertised Job Title**:** | Senior Software Engineer Robotics |
| Job Reference: | 60776 |
| 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: | 80% |
| Percentage of Client Focus - External: | 20% |
| Reports to the: | Software Team Leader |
| Number of Direct Reports: | 0 |
| For Applicant Enquiries  | Kazys Stepanas – kazys.stepanas@csiro.au |
| For difficulties applying: | Call 1300 984 220 or email 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’ through the ‘People Hub’ icon  |

## Role Overview:

The role of Research Projects staff in CSIRO is to collaborate in scientific activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental and observational 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 management and/or industry liaison.

The Senior Software Engineer Robotics will develop software solutions for robotic and automated systems platforms within the Cyber Physical Systems program. They will work with world leading technologies in perception, autonomy and field robotics. They will fill a critical role within this multi-skilled and highly motivated Robotics and Automated Systems software team. This role offers highly rewarding work with research scientists and engineers working on world leading research and robotics systems.

## Duties and Key Result Areas:

* + Design and develop high-quality software solutions
	+ Identify, prioritise and deliver on software development tasks
	+ Champion and improve on software development best practice processes
	+ Review, debug and optimise code
	+ Collaborate with researchers to achieve research project outcomes
	+ Investigate, diagnose and debug technical issues in order to identify viable solutions.
	+ Follow appropriate processed and procedures for managing client issues and identify process improvements.
	+ Support and mentor other staff.
	+ 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.

**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:** 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.

**Essential Criteria:**

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

1. Relevant trade certificate/diploma/bachelor’s degree or equivalent industry experience in software engineering
2. 5+ years C/C++ software development experience
3. 2+ years real-time software development experience
4. Evidence of exemplary software engineering skills in areas such as robotics software development, AI and autonomous systems development, communication protocols, 3D geometry processing and linear algebra, machine vision and image processing.
5. Demonstrated championing and applying software engineering best practise.
6. High level of oral and written communication skills.
7. Demonstrated strong leadership skills.
8. Proven ability to work independently.

**Desirable Criteria**

1. High level of expertise with Linux based operating systems
2. Experience with ROS; Robot Operating System
3. High level of familiarity of various communication protocols
4. Machine vision and image processing experience
5. An understanding of linear algebra
6. AI and autonomous systems experience
7. Excellent debugging and bug fixing skills
8. DevOps and Docker deployment

**CSIRO Data61** In today’s data-focused world, there’s no doubt that numbers count. [**Data61**](http://www.data61.csiro.au/) are the largest data innovation group in Australia, a connector that brings together technology innovators, businesses and universities to transform Australian industry and to help solve our greatest challenges. A CSIRO business, we are creating our data-driven future.

**Our commitment to you**We work flexibly at CSIRO, offering a range of options for how, when and where you work. Talk to us about how this role could be flexible for you. We emphasise an individual’s growth and development which is supported by interacting and learning from world leading scientists and engineers, who provide the opportunity to challenge, transform and innovate new ideas.

CSIRO’s Data61 is committed to sourcing the brightest and best talent to become part of the Data61 family, which contributes to creating Australia’s data driven future.