# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants |
| Advertised Job Title | Research Engineer (Human Centric Security) |
| Job Reference | 90669 |
| Tenure | Specified Term of 18 months  |
| Salary Range | AU$105,806 - AU$114,500 plus up to 15.4% superannuation |
| Location(s) | Any major capital In Australia considered  |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian/New Zealand Citizens and Australian Permanent Residents
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| Position reports to the | Team Leader, Human Centric Security |
| Client Focus – Internal | 0% |
| Client Focus – External | 100% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Marthie Grobler via email at marthie.grobler@data61.csiro.au or phone +61 3 9518 5953 |
| 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 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 Research Engineer will work closely with leading Research Scientists and Engineers within the [Distributed Systems Security](https://research.csiro.au/distributed-systems-security/) group. The role of Research Engineer staff is to support innovative research through design and development to lead in scientific achievements aligned with CSIRO’s strategies. As part of the Human Centric Security team, this role will contribute to realising the Data61 focus on AI and cyber security, as well as humans and machines. In particular, this role will build on the work already done to ensure effective collaboration between humans and machines/AI/robots to develop security solutions. There is growing acknowledgement that the best results follow when humans work collaboratively with machines, in both physical and digital worlds. Collaborative intelligence, or the symbiotic relationship between humans and machines working together, can help remediate the existing imbalance in digital adoption and advance the rate of digital transformation. This role will grow the team’s capacity in the development of AI-related technologies focused on leveraging human factors to strengthen cyber security and invisible security that can support seamless human-system integration. The key duties are to solve various cyber security problems aligned with Data61’s research strategies in novel and practical ways, collaborate with colleagues and customers, and keep a health and safe work environments.

### Duties and Key Result Areas

* Contribute to projects and carry out engineering tasks in developing collaborative (human and machine) intelligence to support human decision making in a number of different cyber security scenarios.
* Contribute to projects in developing robust AI techniques that can use behavioural human factors to strengthen cyber security understanding, application and adoption.
* Contribute to projects in developing invisible security mechanisms to support humans and machines working together.

## **Selection Criteria**

#### Essential

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

1. Strong understanding of data structures, algorithms, design patterns, software testing and software lifecycles.
2. Proficiency in a wide range of programming languages, including Python, Java, C/C++, Go or equivalent.
3. Experience in back-end and front-end development, especially using Python, Django, node.js, Angular, ReactJS, VueJS or equivalent.
4. Ability to work effectively as an integral member of a multi-disciplinary, regionally dispersed research team, and foster an environment in which there is a high level of cooperation within and between teams, as well as the motivation and discipline to carry out autonomous research.
5. High level of written and oral communication skills with the ability to represent the research team effectively internally and externally.
6. Demonstrated professional and respectful behaviour and attitude in a collaborative environment.

#### Desirable

1. Proficiency in using RDBMS and NoSQL, such as MySQL, PostgreSQL, SQLite and MongoDB.
2. Experience in muti-threading, parallel processing, distributed systems and designing/ architecting complex systems.
3. Experience in cloud solutions, including Docker, Docker Swarm, Kubernetes, AWS, Azure or equivalent.
4. Experience with Unity or a similar gamification platform.

## **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 responses by adapting/creating and testing alternative solutions.
* **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.
* **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 change.

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/) 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