# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants |
| Advertised Job Title | Research Scientist (Human Centric Security) |
| Job Reference | 90664 |
| Tenure | Specified Term of 18 months  |
| Salary Range | AU$105,806 - AU$114,500 plus up to 15.4% superannuation |
| Location(s) | Melbourne, Clayton |
| 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 role of Research Scientist/Engineer staff is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. The Research Scientist/Engineer may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. The Research Scientist/Engineer will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

The Research Scientists will work closely with leading Research Scientists and Engineers within the [Distributed Systems Security](https://research.csiro.au/distributed-systems-security/) group. They carry out innovative, impactful research of strategic importance to CSIRO with the possibility of novel and important scientific outcomes. They present the findings in appropriate publications and at conferences.

As part of the Human Centric Security team within the Distributed Systems Security Group, 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. The deliverables of this role are research driven by impacts, including high-quality scientific papers, technical reports, usable systems for customers or community. It is ideal that the scientist has the research background and skills on data and system security, with high quality papers published on major cyber security conferences and journals, with the capability of proposing new ideas and prototype development.

### Duties and Key Result Areas

* Contribute to projects and carry out research to develop collaborative (human and machine) intelligence to support human decision making in a number of different cyber security scenarios.
* Contribute to projects and carry out research to develop robust AI techniques to use behavioural human factors to strengthen cyber security understanding, application and adoption.
* Contribute to projects and carry out research in human-in-the-loop/human-out-of-the-loop/AI-in-the-loop/AI-out-of-the-loop to develop robust AI techniques to identify the best fit in a number of different cyber security scenarios.
* Contribute to projects and carry out research to develop invisible security mechanisms to support humans and machines working together.
* Contribute to projects and carry out research in explainable AI with a humanistic focus to support the notion of making cyber security accessible to all Australians.
* Contribute to projects and carry out research to develop a strong and usable cyber security gamification platform that incorporates collaborative intelligence.
* Contribute to the writing and publication of high-quality articles acceptable to high-rank conferences (CHI, ASE, ACM CCS, WWW, IEEE S&P, NDSS) and high impact journals (TOCHI, TOSEM, AI).

## **Selection Criteria**

#### Essential

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

## **Desirable**

1. Previous experience in applying theoretical computer science (e.g., information theory, algorithms, complexity theory and optimization or number theory) to practical cyber security problems, particularly considering human factors in a cyber security context.
2. Previous experience in developing collaborative (human and machine) intelligence mechanisms to support human decision making.

Previous experience in applying human-in-the-loop/human-out-of-the-loop scenarios.

## **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