# 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 | 92521 |
| Tenure | Indefinite  |
| Salary Range | AU$105,806 - AU$114,500 per annum (pro-rata for part-time)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 | * Any candidates
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| Position reports to the | Team Leader, Human Centric Security |
| Client Focus – Internal | 50% |
| Client Focus – External | 50% |
| 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 [Cybersecurit](https://research.csiro.au/distributed-systems-security/)y and Quantum Systems 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, this role will contribute to realising the Data61 focus on humans and machines. In particular, this role will contribute to multiple human-centred projects with a strong cybersecurity focus, with specific experience in UX research and design, usable security and privacy, and human-computer interaction. This role will grow the team’s capacity in the development of its core capabilities in usable security and privacy, and human-computer interaction.

The key duties of the role are to solve various cybersecurity 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 cybersecurity 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 cybersecurity scenarios.
* Contribute to projects and carry out research on behavioural human factors to strengthen cybersecurity 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 cybersecurity 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 cybersecurity accessible to all Australians.
* Contribute to projects and carry out research to develop a strong and usable cybersecurity gamification platform that incorporates collaborative intelligence.
* Contribute to the designing of conceptual models, storyboards, and prototypes for research project deliverables.
* Contribute to conducting user interviews and usability testing.
* Contribute to analysing research data and identifying opportunities for improvement, necessitating strong skills and experience in quantitative analysis, statistical analysis and thematic analysis.
* 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.*

1. A doctorate in a relevant discipline area, such as Computer Science, Data Sciences, Cybersecurity, Information Technology, Communications or Software Engineering, and 3 years work experience as a postdoctoral fellow or equivalent.
2. Demonstrated experience in conducting research activities and having the ability to undertake research in human-centric security.
3. Proven ability to conduct high-quality research, development and implementation in AI and human-centric security with publications in top tier security conferences (CHI, ASE, ACM CCS, WWW, IEEE S&P, NDSS) and high impact journals (TOCHI, TOSEM, AI), or similar level conferences in other domains.
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, including the presentation of research outcomes at national and international conferences.
6. Demonstrated professional and respectful behaviour and attitude in a collaborative environment.

## **Desirable**

1. Experience in applying research outcomes in solving practical/industry problems, preferably in the area of human-centric security and usability.
2. Previous experience in applying human-in-the-loop/human-out-of-the-loop scenarios.
3. Demonstrated record of science innovation and creativity, including the ability and willingness to incorporate novel ideas and approaches into scientific investigations.

## **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