# Position Description

## Research Projects – CSOF3CSIRO Data61 logo

The following information is for applicants

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| Advertised Job Title**:** | Software Engineer |
| Job Reference: | 62438 |
| 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: | 50% |
| Percentage of Client Focus - External: | 50% |
| Reports to the: | Team Leader |
| Number of Direct Reports: | 0 |
| 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  |
| Contact details to discuss this position: | Thierry Rakotoarivelo via email: thierry.rakotoarivelo@data61.csiro.au P*lease do not email your application directly to Thierry Rakotoarivelo. Applications received via this method will not be considered.*  |
| If you have difficulty applying please contact: | Call 1300 984 220 or email careers.online@csiro.au.  |

## Role Overview:

Data61 is the result of a merger between National ICT Australia (NICTA) and CSIRO’s digital research unit, creating one of the largest digital research teams in the world and, outside of the Department of Defence, Australia’s leading capability in cyber security research.

The Software Engineer will develop and deploy software, which implement the cutting-edge research activities of our group in the domain of information privacy and security, with a focus on real-life applications. This may include the development of privacy preserving software for data release, privacy preserving analytics and private data processing, or quantification of privacy risks. The Software Engineer will have the ability to learn fast, demonstrate strong initiatives, and use agile approaches to develop research and production software.

The Software Engineer will work in a vibrant research environment in collaboration with a talented team of researchers and engineers in the Information Security and Privacy Group of Data61. The team aims to achieve the exciting and challenging goal of enabling the use of data in our digital economy while preserving the privacy and confidentiality of individuals or organisations. Our research targets the most prestigious international publication venues and aims to educate Australia’s best under/post graduate students.

## Duties and Key Result Areas:

* Design and implement high-quality software (e.g. demonstrator, research prototypes or proof-of-concept, production systems).
* Collaborate with researchers to implement and evaluate the performance of the algorithms and mechanisms resulting from the research activity of our information security and privacy group.
* Apply ‘standard’ software engineering practices (Agile methods, versioning, etc) to develop efficient and readable software code in timely manner.
* Develop and maintain technical documents related to the developed software, such as manuals, reports, tutorials, API references, etc.
* Provide technical coaching and training to colleagues on developed software or specific software technologies, as required.
* Under project leader’s direction, participate in planning projects and accept responsibility for the scheduling and delivery of major parts of projects as per deadlines, including allocating and directing tasks where appropriate.
* Collaborate with internal and external partners to build privacy-aware data-driven platforms and to increase awareness of privacy risks and privacy preserving technologies.
* Represent CSIRO Data61 and the research group either nationally or internationally in events to deliver technical presentations, tutorials, or demonstrate the software from our research group.
* Make significant contributions to the effective functioning of the research group and help deliver CSIRO Data61’s organisational objectives and plans.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers 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:

1. **Teamwork and Collaboration: Proactively seeks and considers the ideas and opinions of others from within and outside the team to help form decisions, plans or actions.**
2. **Influence and Communication: Puts forward ideas by presenting factual information supported by data, definitions, examples, illustrations or other aids, which will assist in conveying meaning.**
3. **Resource Management/Leadership: Provides instruction and assists other staff to complete allocated tasks and activities.**
4. **Judgement and Problem Solving:** Identifies and considers the implications of a range of available alternatives in order to select the most appropriate response to problems of a familiar or recurring nature.
5. **Independence: Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).**
6. **Adaptability:** Willingness to change ideas or perceptions based on new information, contrary evidence or other people's points of view. Prepared to try out different approaches.

## Selection Criteria:

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

1. A tertiary qualification and/or equivalent engineering experience in relevant discipline areas, such as computer science, software systems and engineering, distributed computing, information privacy & security, or a closely related field and relevant experience in the area of privacy enhancing technologies.
2. 1+ year of industry or academia experience in a comparable position, with a record of developing scalable, robust, and maintainable software applications.
3. Experience in developing software code in Python, Scala, and/or other languages (e.g. Java, C++), as well as in data processing tools, such as R, SciPy, or Matlab.
4. Strong understanding of basic computing, networking, and mathematical concepts.
5. Ability to think creatively, take initiatives, prototype original ideas and deliver them through to clients, working to deadlines.
6. Ability and willingness to learn new technologies and abstract concepts as required.
7. A demonstrated ability to collaborate and to perform efficient joint work under minimal supervision, on multi-disciplinary challenges through successful collaborations with researchers from industry and academia.

## Desirable Criteria:

1. Previous experience in cyber security, network security, data-driven privacy threats identification and quantification, machine learning, data analytics, or cryptography.
2. Previous experience in engineering innovation and research.
3. Previous experience with DevOps methods, practises, and tools.
4. Previous experience in collaborating with researchers to publish peer-reviewed publication.
5. Familiarity with network protocols, or Internet services and communication systems.

## Special Requirements:

Appointment to this role may be subject to conditions including security/national police/medical/character clearance requirements. Applicants who are not Australian Citizens or Permanent Residents may be required to undergo additional security clearances, which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).- <https://ielts.com.au/>

## About CSIRO:

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

Find out more about the CSIRO [Data61](http://www.data61.csiro.au/)!