# Research Scientist - CSOF5

Role summary for potential applicants

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| Advertised Job Title**:** | Machine Learning Researcher |
| Reference Number**:** | 57800 |
| Classification**:** | CSOF5 |
| Salary Range: | AU $97,276 to AU $105,269 plus up to 15.4% superannuation |
| Location**:** | Canberra, ACT or Sydney, NSW |
| Tenure: | Specified term of 3 years |
| Relocation assistance**:** | * Will be provided to the successful candidate if required.
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| Applications are open to: | All Candidates |
| Functional Area**:** | * Research Scientist / Engineer
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| Number of Direct Reports: | * 0
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| Reports to the: | * Team Leader, Foundations and Methods / Group Leader, Machine Learning
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| **Role Overview:** |
| Data61 is offering an exciting opportunity for a Researcher to join its Machine Learning Research Group (MLRG). We are seeking talented researchers with core expertise in causal inference, reinforcement learning, deep learning, convex optimization, non-parametric Bayesian analysis. You will be working in the MLRG, a group with expertise in core ML methods that spans a wide area of computer science and applied mathematics. You will also collaborate with experts in related fields (including statistics, computer vision, natural language processing, etc.).You will be solving real-world problems and be contributing to foundational work on core ML. You will be pushing the boundaries of the state of the art on challenging ML projects the MLRG is involved in along with major stakeholders.Data61 is the largest data innovation group in Australia, bringing together approximately 600 research staff, including a strong 300+ PhD student program in collaboration with the best universities across Australia.We provide flexible working hours, ownership of projects, freedom to experiment with new technologies and the ability to learn and grow to your full potential. |

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| **Duties and Key Result Areas:** |
| * Researching, designing and developing new algorithms for causal inference, reinforcement learning, deep learning, convex optimization, non-parametric Bayesian analysis.
* Incorporate novel approaches to scientific investigations by adapting and/or developing original concepts and ideas for new, existing and further research.
* Producing high quality scientific and/or engineering artefacts (e.g., papers, patents, code, and demos) suitable for publication in leading national and international venues.
* Prototyping reusable, publicly available code.
* Work collaboratively and honestly with internal and external colleagues, clients and partners to help define and satisfy objectives for research projects.
* Maintaining high ethical and performance standards.
* Work effectively as part of a multi-disciplinary, regionally dispersed research team, to undertake independent scientific investigations and carry out associated tasks under the guidance of more senior Research Scientists/Engineers.
* Adhering to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.
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| **Selection Criteria:** |
| *Under CSIRO policy only those who meet all essential criteria can be appointed****Pre-Requisites:***1. **Education/Qualifications:** A doctorate and/or equivalent research experience in a relevant discipline area, such as engineering, applied mathematics, physics or computer science.
2. **Communication:** Strong written and oral communication skills including the ability to publish research results, prepare reports and present the results of scientific investigations at national and international conferences and stakeholder meetings.
3. **Publications: A solid record of publication in high quality, peer reviewed conferences or journals (ex: ICML, NIPS, AISTATS, COLT, ICLR, JMLR, T. PAMI, …).**
4. **Behaviours: A history of professional and respectful behaviours and attitudes in a collaborative environment.**

***Essential Criteria:***1. Experience in one or more of the following topics: causal inference, reinforcement learning, deep learning, convex optimization, non-parametric Bayesian analysis. Candidates with related research interests are encouraged to tell us about your passion.
2. Experience solving problems using quantitative approaches on real-world data.
3. A record of quality publications, in high quality peer reviewed journals or conferences. We are particularly interested in evidence of rigorous empirical or theoretical outcomes that you have done.
4. Ability to think creatively, to work collaboratively and to perform tasks under minimal supervision.

**Desirable Criteria:**1. Experience in cross-disciplinary projects.
2. Contribution to open source projects.
3. Exposure to both industry and academic research.
4. Experience mentoring junior researchers or junior engineers.

Data61 is a values based organisation. Our leaders will be expected to demonstrate the following values: **Great Impact:** We focus our valuable resources on areas where we can lead globally and have large impact for Australia, to aid our future prosperity and independence.  **Mastery:** We are fearless, curious and we improve every day. We strive to excel in research, technology and business, and to work with the best in the world.  **Co-Creation of Value:** Everything we do involves co-creation with our network: team, customers and partners. Generously empowering their success is central to our success.  **Ownership of Results:** We jointly hold ourselves accountable for our actions. We do this via trust and commitment.**People and their Differences:** We embrace the creativity that comes from the diversity of our people.**Agility and Flexibility:** We view the changing world as an opportunity. This requires agility and flexibility in everything we do; everything changes, except our constant desire to adapt.**Tell it Straight, with Respect:**We say what we mean, mean what we say, and do not mislead, obfuscate or spin. We're direct and always respectful. |

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| **Other Information:** |
| **How to Apply**Please apply for this position online at [www.csiro.au/careers](http://www.csiro.au/careers). You will need to upload your cover letter and resume/CV as one document, expressing your interest in the role and broadly addressing your suitability. Please provide sufficient relevant information to enable the selection panel to assess your suitability. Should your application proceeds to the next step, you may be asked to provide additional information.If you experience difficulties applying online call 1300 984 220 and someone will be able to assist you. Outside business hours please email: careers.online@csiro.au**Referees**: If you do not already have the names and contact details of two previous supervisors or academic/ professional referees included in your resume/CV please add these before uploading your CV.**Contact:** If after reading the selection documentation you require further information please contact: Dr Cheng-Soon Ongvia email: Cheng-Soon.Ong@data61.csiro.au or phone: +61 2 6218 3723 Dr Richard Nockvia email: richard.nock@data61.csiro.au or phone: +61 2 9490 5639Please do not email your application directly to Dr Ong or Dr Nock. Applications received via this method will not be considered.**About CSIRO**Australia is founding its future on science and innovation. Its national science agency, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation. Find out more! [www.csiro.au](http://www.csiro.au). **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.Find out more! <http://www.csiro.au/en/Research/D61> |