# Research Scientist/Engineer – CSOF6

Role summary for potential applicants

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| Advertised Job Title**:** | Senior Research Scientist – Computer Vision |
| Reference Number**:** | 46002 |
| Classification**:** | CSOF6 |
| Salary Range: | AU $109,474 to AU $128,282 plus up to 15.4% superannuation |
| Location**:** | Black Mountain, ACT |
| Tenure: | Specified Term of 2 years |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | * All Candidates |
| Functional Area**:** | Research Scientist / Engineer |
| % Client Focus - Internal: | 30% |
| % Client Focus - External: | 70% |
| Reports to the: | Team Leader |
| Number of Direct Reports: | Principal Research Scientist (Team Leader) |

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| **Role Overview:** |
| The role of Research Scientist Staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO's strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You 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. You may be involved in leading research projects or undertaking work that has impact on the development of scientific or technical knowledge.  The Senior Research Scientist will be an integral part of the team collaborating with Researchers, Research Engineers and Students. The role will offer the opportunity to learn from others, as well as sharing your own knowledge. This is a senior role and it is expected you will support and assist others in the team, and can step up to assist in managing the team when necessary.  The area of research that the Senior Research Scientist will be working in is Computer Vision, which includes developing new theory and algorithms addressing ‘hot’ topics in the area. Specifically you will work with technologies that can potentially be deployed in real-world systems, such as autonomous vehicles, robotics, and surveillance systems. The Senior Research Scientist will write research papers and corresponding code demonstrating the results. This will also include working with Research Engineers to produce working demonstrators. |

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| **Duties and Key Result Areas:** |
| * Incorporate novel approaches to scientific investigations by adapting and/or developing original concepts and ideas for new, existing and further research. * Write monthly reports on various activities, research, and business. * Prepare and give presentations to internal as well as external stake holders and business partners when necessary. * Assist in the development of business and research proposals. * Assist in managing the team when the team leader is unavailable. * Share ideas and results with the team through published research results and claims that are repeatable (eg. Shared source code) * Assist with the supervision of PhD students in the team * Communicate effectively and respectfully in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation. * Produce high quality scientific and/or engineering papers suitable for publication in quality journals and for presentation at national and international conferences. * Work effectively as an integral member or leader of a multi-disciplinary, often regionally dispersed research team, to undertake independent scientific investigations and carry out/delegate associated tasks under broad guidance from more senior Research Scientists/Engineers. * Work collaboratively and honestly with internal and external colleagues, clients and partners to develop and progress challenging but realistic research plans for a range of research projects. * Lead small research projects and assist with elements of larger projects including the negotiation of resource requirements. * Lead, coach and supervise staff to ensure experiments are established in accordance with research design, within agreed timelines and budget. * Adhere 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 in Computer Science or Electrical Engineering or equivalent with research experience in the area of Computer Vision. 2. **Communication: Excellent written and oral communication skills, evidenced by high-level reporting, presentation and negotiation abilities, and the capacity to identify and influence critical stakeholders to gain support for contentious proposals/ideas.** 3. **Publications: A significant record of quality publications as primary author in high impact, peer reviewed journals.** 4. **Behaviours:** A history of professional and respectful behaviours and attitudes in a collaborative environment.   ***Essential Criteria:***   1. Significant experience in the area of Deep Learning, both practical and theoretical, as applied to the area of Computer Vision. 2. Experience in supervising PhD students 3. **The ability to work effectively as a member or leader of a multi-disciplinary, regionally dispersed research team, and carry out independent individual research, to achieve organisational goals.** 4. A significant record of science innovation and creativity plus the ability to apply well developed research skills to scientific investigations.   **Desirable Criteria:**   1. It is highly desirable that the applicant has experience in areas of Computer Vision such as Action Recognition/Detection/Anticipation, Semantic Segmentation, Object Recognition/Detection, Domain Adaptation, Transfer Learning, Image Captioning 2. It is desirable that the applicant has experience working in the Linux environment with programming languages such as Matla, Python and C++, and is familiar with modern Computer Vision/Deep Learning libraries such as MatConvNet, Keras, Caffe, Theano, TensorFlow or similar. 3. It is desirable that the applicant has experience in good software engineering practices in a collaborative environment. 4. It is desirable that the applicant has experience in academic activities such as reviewing and/or organising workshops/conferences.   **CSIRO is a values based organisation. You will need to demonstrate behaviours aligned to our values of:**   * Integrity of Excellent Science * Trust & Respect * Creative Spirit * Delivering on Commitments * Health, Safety & Sustainability   ***Other special requirements:***  *Appointment to this role may be subject to conditions including security/medical/character clearance requirements. Applicants who are not Australian Citizens or Permanent Residents may be required to undergo additional security clearance processes; which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).-* [*http://www.ielts.org/default.aspx*](http://www.ielts.org/default.aspx) |

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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 may be asked to provide additional information (online) relevant to the selection criteria. If so, then responding will enhance your application so please take the time to provide relevant succinct answers. Applicants who do not provide the information when requested may not be considered.  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](mailto: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 Lars Petersson via email: Lars.Petersson@data61.csiro.au or phone: +61 2 6218 3727  Please do not email your application directly to Dr Petersson. 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).  **About 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.data61.csiro.au/> |