# backgroundData 61 and CSIRO logoResearch Engineering – CSOF6

Role summary for potential applicants

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| Advertised Job Title**:** | Senior Research Engineer |
| Reference Number**:** | 42562 |
| Classification**:** | CSOF6 |
| Salary Range: | AU $106k to AU $124k plus up to 15.4% superannuation |
| Location**:** | Canberra ACT or Eveleigh, Sydney NSW |
| Tenure: | 3 year fixed-term |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | All candidates |
| Functional Area**:** | RS/RE |
| Number of Direct Reports: | 0 |
| Reports to the: | Team Leader – Data Science Platforms |

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| **Role Overview:** |
| Data61 has an exciting opportunity for a Senior Research Engineer to develop creative solutions for real world problems. We are currently building novel technologies for data integration and graph analytics with real impact for Australia. We are seeking people with expertise in machine learning, graph algorithms, data integration, data representation, deep learning, distributed algorithms, reinforcement learning, text mining, image processing or natural language processing. We can 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 graph analytics and data integration. * Evaluating and summarising current research quickly and concisely. * Building elegant, efficient and readable code. * Collaborating effectively with research, engineering and business teams across Data61 to ensure that project goals and Data61’s goals are achieved. * Providing technical direction, taking ownership of projects, presenting ideas and fostering creativity in others * Maintaining high ethical and performance standards. * 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:** Bachelor degree in a scientific or engineering discipline such as Computer Science or equivalent commercial experience in software engineering*.* 2. **Communication:** High-level communication skills, both written and oral, including the ability to anticipate the interests and knowledge level of an audience and present information and feedback accordingly. 3. **Behaviours:** A history of professional and respectful behaviours and attitudes in a collaborative environment. 4. **Adaptability:** The ability to effectively manage a number of competing priorities simultaneously, and carry out non-routine tasks independently. 5. **Problem Solving:** Proven ability to investigate underlying issues of complex and ill-defined problems and develop appropriate responses by adapting/creating and testing alternative solutions**.**   ***Essential Criteria:***   1. Experience in one or more of the following: machine learning, graph algorithms, data integration, data representation, recommendation systems, deep learning, distributed algorithms, reinforcement learning, text mining, image processing or natural language processing. 2. Experience solving problems using quantitative approaches on real-world data. 3. Experience with one or more of the following programming languages: Python, R, MatLab, C, C++, Java, Scala 4. Ability to think creatively, to work collaboratively and to perform tasks under minimal supervision. 5. Ability to take ownership of their project, provide technical direction, present their ideas and foster creativity in others 6. The ability to collaborate and grow with a multi-disciplinary, regionally dispersed research and engineering team.   **Desirable Criteria:**   1. Masters or PhD in a scientific or technical discipline 2. Experience with functional programming languages e.g. Haskell, Scala, Clojure, OCaml 3. Exposure to both industry and academic research 4. Experience mentoring junior engineers   **CSIRO Values:**  As Australia’s Innovation Catalyst, CSIRO has strategic actions underpinned by behaviours aligned to Excellent science, Inclusion, trust & respect, Health, safety & environment and Deliver on commitments.  In your application and at interview you will need to demonstrate alignment with these behaviours.  In Data61, our leaders will be expected to demonstrate the following values:   1. **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. 2. **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. 3. **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. 4. **Ownership of Results:** We jointly hold ourselves accountable for our actions. We do this via trust and commitment. 5. **People and their Differences**: We embrace the creativity that comes from the diversity of our people. 6. **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. 7. **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. 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: [csiro.careers@csiro.au](mailto:csiro.careers@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 Alex Collins via email Alex.Collins@data61.csiro.au or phone 02 9490 5963 or Dr Stephen Hardy via email: Stephen.Hardy@data61.csiro.au or phone: 02 9490 5532.  Please do not email your application directly to Dr Collins or Dr Hardy. 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).  **We work flexibly at CSIRO, offering a range of options for how, when and where you work.**  **Find out more here!:** <https://www.csiro.au/en/Careers/A-great-place-to-work/Work-life-balance>  **Data61** is Australia’s digital powerhouse, formed by the recent integration of NICTA and CSIRO’s Digital Productivity business unit. We bring a multidisciplinary approach with design thinking, creativity, and behavioural economics to solve complex business problems, digital transformation and early stage commercialisation of data-centric solutions.  Data61 is a CSIRO entity, Australia’s preeminent scientific organisation. Being part of CSIRO gives us access to deep domain expertise across all of the industry sectors most likely to be disrupted over next 5-20 years.  Data61 focuses on every aspect of data research and development, from data capture [via sensor technology and robotics] to data consumption; communications and networking; infrastructure; hardware and software; cybersecurity; data statistics, modeling and analytics; decision sciences; behavioural economics and cognitive sciences—across every major industry sector.  Find out more – visit our [website](http://www.data61.csiro.au) |