# backgroundData 61 and CSIRO logoResearch Projects – CSOF7

Role summary for potential applicants

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| Advertised Job Title**:** | Software Engineer – Data Engineering |
| Reference Number**:** | 56954 |
| Classification**:** | CSOF7 |
| Salary Range: | AU $131k to AU $145k plus up to 15.4% superannuation |
| Location**:** | Canberra, ACT |
| Tenure: | Specified Term of 2 years |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | Australian Citizens Only (Must be willing/able to hold Australian Security Clearance) |
| Functional Area**:** | Research Projects |
| 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 Software Engineer to help develop innovative solutions to real world problems. We are currently building new technologies for data integration and machine learning on graphs with real impact for Australia. We are seeking creative people to solve entity resolution problems, design and build data pipelines, and write elegant software at scale for the Australian government. We can provide flexible working hours, freedom to experiment with new technologies, and the ability to grow to your full potential.  **Security Clearance:** This is a security assessed position and successful applicants will be required to obtain and maintain a security clearance. To obtain an Australian Government security clearance you must be an Australian Citizen. Applicants seeking sponsorship or who only hold residency status will not be considered. |

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| **Duties and Key Result Areas:** |
| * Lead collaborations with internal and external stakeholders on large-scale entity resolution problems for graphs. * Apply specialist expertise to designing and developing data streaming pipelines for machine learning at scale. * Deliver machine learning solutions to government clients. * Build and deliver elegant, efficient and readable code. * Collaborate effectively with research, engineering and business teams across Data61 to ensure that project goals and Data61’s strategic goals are achieved. * Communicate and collaborate with external clients, anticipating and resolving architectural and technical problems for distributed algorithms. * Develop and implement project plans including analysing, validating and reporting results within the projects constraints. * Initiate projects in consultation with clients, secure the necessary resources and consider the future impact on bottom line. * 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. **Collaboration:** The ability to collaborate effectively with a regionally dispersed, multi-disciplinary research and engineering team. 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. Ability to build high quality solutions to complex data engineering problems. 2. Experience with two or more of the following programming languages: Python, Scala, Haskell, Kotlin, Go, Clojure, C, C++, Java. 3. Experience working with database technologies. 4. Demonstrated ability to think creatively, work collaboratively and perform tasks under minimal supervision. 5. Demonstrated ability to take ownership and lead projects, provide technical direction and supervision, present 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. Experience or interest in entity resolution, identity resolution, or entity extraction. 2. Experience with distributed computing frameworks e.g. Apache Spark, Flink, and Hadoop. 3. Interest in machine learning and graph analytics. 4. Interest in functional programming languages e.g. Haskell, Scala, Clojure, OCaml.   **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 <https://jobs.csiro.au/> and enter requisition number **56954**. Internal applicants please apply via ‘Jobs Central’ in SAP (click ‘Recruitment’)  Please load your CV (Maximum 2MB). You may also be required to respond to some screening questions.  If you experience difficulties applying online call 1300 984 220 for assistance. Outside Australian business hours please email: [csiro-careers@csiro.au](mailto:csiro-careers@csiro.au).  **Referees**: Please provide contact details of two previous supervisor or academic/professional referees in your resume/CV. We will ask your permission before making contact.  **Contact:** If after reading the position details above you require more information please contact:  Alex Collins via email Alex.Collins@data61.csiro.au or phone 02 9490 5963 or Stephen Hardy via email: Stephen.Hardy@data61.csiro.au or phone: 02 9490 5532.  Please do not email your application directly. 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. Talk to us about how this role could be flexible for you.  Find out more! [CSIRO Balance](https://www.csiro.au/en/Careers/A-great-place-to-work/Work-life-balance)  **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.  **Our commitment to you** We work flexibly at CSIRO, offering a range of options for how, when and where you work. Talk to us about how this role could be flexible for you. We emphasise an individual’s growth and development which is supported by interacting and learning from world leading scientists and engineers, who provide the opportunity to challenge, transform and innovate new ideas.  CSIRO’s Data61 is committed to sourcing the brightest and best talent to become part of the Data61 family, which contributes to creating Australia’s data driven future. |