# Position Description

# backgroundData 61 and CSIRO logoResearch Projects – CSOF6

Role summary for potential applicants

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| Advertised Job Title**:** | Senior Software Engineer / Data Engineer (Spark, Scala) |
| Job Reference: | 60259 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | * All Candidates |
| Percentage of Client Focus - Internal: | 100% |
| Percentage of Client Focus - External: | 0% |
| Reports to the: | Team Leader – Graph Platform Team |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries | Alex Collins  Email: [Alex.Collins@data61.csiro.au](mailto:Alex.Collins@data61.csiro.au)  Phone 02 9490 5963 or  Tim Pitman  Email: [Tim.Pitman@data61.csiro.au](mailto:Tim.Pitman@data61.csiro.au)  Phone: 02 9490 5633. |
| Contact Details For Applying | Call 1300 984 220 or email [careers.online@csiro.au](mailto:careers.online@csiro.au). |
| 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  Please do not email your application directly to Alex Collins or Tim Pitman.   Applications received via this method will not be considered by the selection panel. |

## **Role Overview:**

Data61 is the largest data innovation group in Australia. We are unrivalled in our intellectual capital and our network with the global technology marketplace. The combined group will bring together approximately 600 research staff working in digital technologies to create benefit for Australia. Data61 will continue to develop Australia’s future leaders with its strong 300+ PhD student program in collaboration with our best universities across Australia.

The role of the Senior Software Engineer - Data Engineer (Scala, Spark) is to develop new technologies for data integration and graph analytics with real impact for Australia. The role is to design and build data pipelines and write elegant, usable software at scale.

## **Duties and Key Result Areas:**

* Designing and developing software for data integration and machine learning on large scale graphs.
* Experimenting with new technologies and communicating the results.
* Building elegant, efficient and readable code with Scala and Apache Spark.
* Creating distributed systems for data science at scale.
* 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.
* 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.
* 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.

## **Competencies:**

1. **Teamwork and Collaboration: Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.**
2. **Influence and Communication: Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious proposals/ideas.**
3. **Resource Management/Leadership: Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.**
4. **Judgement and Problem Solving:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
5. **Independence: Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.**
6. **Adaptability:** Demonstrates flexibility in thinking and adapts to, and manages, the increasing rate of organisational change by adjusting strategies, goal and priorities.

## **Selection Criteria:**

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

1. Bachelor degree in a scientific or engineering discipline such as Computer Science or equivalent commercial experience in software engineering
2. Experience designing and developing software for data engineering problems.
3. Experience with two or more of the following programming languages: Scala, Python, Haskell, Rust, Go, C, C++, Java.
4. Ability to think creatively, to work collaboratively and to perform tasks under minimal supervision.
5. Ability to take ownership of projects, 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. Experience with data storage systems and distributed databases
2. Experience with distributed computing frameworks e.g. Apache Spark, Flink, Hadoop
3. Interest in machine learning, graphs and network technologies
4. Interest in functional programming languages e.g. Haskell, Scala, Clojure, OCaml
5. Experience mentoring junior engineers

## **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:**

We imagine. We collaborate. We innovate. To find out more visit us [online](http://www.csiro.au/)!

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