# Position Details

*Research Scientist - Data Integration*

## Research Scientist/Engineer – CSOF5

The following information is for applicants

|  |  |
| --- | --- |
| Advertised Job Title**:** | Research Scientist - Data Integration |
| Job Reference: | 60967 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | Australian Citizens Only |
| Percentage of Client Focus - Internal: | 50% |
| Percentage of Client Focus - External: | 50% |
| Reports to the: | Research Group Leader |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries: | Dr Peter Toscas via email: Peter.Toscas@data61.csiro.au |
| 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’ in SAP (click ‘Recruitment’) |

## Role Overview

The role of Research Scientist Staff in CSIRO is to conduct innovative research that are aligned with CSIRO's strategies. We are looking for an enthusiastic applicant to be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You will have the opportunity to join, build and maintain collaborative networks; play a role in securing project funds; and pursue new scientific ideas and approaches. You will be involved in research projects and share in work that develops new scientific or technical knowledge.

This position is with the Data-Driven Enterprises Group in the Analytics Program of Data61. The Group undertakes research and industry projects to support digitisation of government and private organisations to achieve better inference from large, complex datasets. The position will contribute to the Group’s goals by undertaking research into advanced statistical and machine learning methodologies to enhance the Group’s and Data61’s capabilities in these domains. In addition, the role will liaise and work with industry and the government to help improve their processing of large, complex datasets, and inference drawn from the data, so as to enhance business processes and decision making.

## 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.
* Undertake research into, and development of, advanced statistical and machine learning methodologies.
* 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.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, 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: Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others reactions.**
3. **Resource Management/Leadership: Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.**
4. **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
5. **Independence: Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.**
6. **Adaptability:** Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

## Selection Criteria:

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

1. A doctorate or equivalent research experience in a relevant discipline, such as statistics, mathematics or machine learning.
2. Demonstrable experience in the analysis of large, complex datasets using statistics and machine learning.
3. Theoretical and practical understanding of statistical and machine learning techniques e.g. Bayesian methods, MCMC, support vector machines, gradient boosting, or deep learning.
4. Experience with programming languages such as R and Python, statistical and machine learning tools such as Stan, XGboost, Tensorflow, Theano or Keras and fluent with git and SQL.
5. Proven ability working effectively as a member of a multi-disciplinary, regionally dispersed research team, and experienced in carrying-out independent individual research, to achieve organisational goals.
6. A record of scientific publications at respected peer-reviewed journals and conferences, and/or patent filings in Australia, Europe or the USA.

## Desirable Criteria:

1. Understanding of Hadoop or Spark.
2. Practice in data integration of complex datasets, including data matching and imputation.
3. Understanding of causal inference.

## About CSIRO:

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

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