# Position Description

*Research Scientist – Health Data Interoperability*

## Research Scientist/Engineer – CSOF5

The following information is for applicants

|  |  |
| --- | --- |
| Advertised Job Title**:** | Research Scientist – Health Data Interoperability |
| Job Reference: | 60768 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | * All Candidates
 |
| Percentage of Client Focus - Internal: | 60% |
| Percentage of Client Focus - External: | 40% |
| Reports to the: | Health Data Interoperability Team Leader |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries  | Dr Alejandro Metke JimenezEmail: alejandro.metke@csiro.auTelephone: +61 7 3253 3645 |
| Contact Details For Applying | Call 1300 984 220 or email 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  |

## 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.

The Research Scientist will undertake health informatics research and make a significant contribution to multiple projects undertaken by CSIRO and in collaboration with other academic and commercial partners. These projects will include the development and deployment of novel algorithms and tools that provide clinical decision support from health data. The successful candidate will join a high-performing team working within the Australian e-Health Research Centre (AEHRC). The position makes a hands-on contribution to solving the research challenges found in clinical terminologies, electronic health records, natural language processing, semantic data management, data mining and data analysis. The role also offers a unique opportunity for the Research Scientist to translate their research into practice with impact on both Australian and international e-Health programmes.

## Duties and Key Result Areas:

* Develop innovative concepts, theories, tools and techniques related to the representation, acquisition, analysis and processing of health data.
* Obtain ethical and legislative approval for use of health data.
* Evaluate the effectiveness of computational informatics solutions through qualitative and quantitative analysis.
* Liaise with clients to determine their needs and take personal responsibility for client satisfaction.
* Supervise students and junior staff.
* Under limited direction, assist in the planning and preparation of research proposals and carry out research investigations, requiring originality, creativity and innovation.
* Present results in a meaningful format, prepare reports for clients and/or write scientific papers for publication.
* Address problems promptly and in a constructive manner, selecting the most profitable lines of attack upon a problem, preparing detailed design proposals and experimental protocols.
* Undertake experimental and/or observational research activities, often requiring the supervision and/or training of others to ensure experiments are established in accordance with research design, or as required.
* Draw on professional expertise, knowledge of other disciplines and research experience, recognise opportunities for innovation and generate new theoretical perspectives by pursuing new ideas/approaches and networking with scientific colleagues across a range of disciplines.
* 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.
* 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 selection criteria can be appointed.*

1. A doctorate and research experience in a relevant discipline, such as computer science, information technology, engineering or an equivalent field
2. Demonstrated knowledge and skills in natural language processing (e.g. information extraction, information retrieval, machine learning)
3. Familiarity with Clinical Terminologies such as SNOMED CT and the Human Phenotype Ontology
4. Knowledge and experience with Deep Learning and Neural Networks
5. Demonstrated competence and experience in research innovation, problem solving and the application of knowledge, as evidenced by publications and research experience
6. Advanced programming skills (e.g., Java, C++, JavaScript) and software design (API design and RESTful architectures)
7. Proven ability to work independently and as part of a team to prototype research ideas and develop them into demonstration and/or proof of concept systems. In addition, a demonstrated ability to interact with external/internal collaborators and stakeholders
8. A track record of science innovation and creativity, plus the ability and willingness to incorporate novel ideas and approaches into scientific investigations.

## Desirable Criteria:

1. Knowledge in formal logics such as Description Logic.

## About CSIRO:

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

Find out more about CSIRO [Health and Biosecurity](https://www.csiro.au/en/Research/BF)