# Position Description

## Research Scientist/Engineer – CSOF5

The following information is for applicants

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| Advertised Job Title**:** | Research Scientist in Health Intelligence |
| Job Reference: | 62935 |
| Location: | Brisbane / Sydney |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | Australian/New Zealand Citizens and Australian Permanent Residents Only |
| Percentage of Client Focus - Internal: | 60% |
| Percentage of Client Focus - External: | 40% |
| Reports to the: | Team Leader, Health Intelligence Team |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries  | Dr Sankalp KhannaEmail: Sankalp.Khanna@csiro.au Phone: 07 3253 3629 |
| 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 successful candidate will work in collaboration with scientists, clinicians and other health professionals, and contribute to multiple projects in the area of Health Intelligence particularly focussed on the development and use of novel and interpretable machine learning algorithms and workflows for applications in healthcare such as improving productivity and efficiency, informing treatment effectiveness, risk stratification and clinical decision support.

The scientific problems that arise in Health Systems Analytics are varied and challenging, requiring strong mathematical and statistical grounding. In addition, the successful candidate will be enthusiastic about making a hands-on contribution to solving research challenges and will have established expertise in the development and application of machine learning algorithms for solving real world problems.

The Health System Analytics group is part of the Australian eHealth Research Centre (AEHRC), CSIRO’s Digital Health Research program and conducts high impact research in the domains of Health Intelligence and Health Implementation Science. The position provides an exciting career path for an applicant who is keen to be part of a growing team contributing towards significant research goals and delivering impact on national and international health policy aligned with the AEHRC Health Systems Analytics group’s strategies.

## Duties and Key Result Areas:

* Incorporate innovative approaches to scientific investigations by adapting and/or developing original concepts and ideas for new, existing and further research.
* Health data analytics and development and application of machine learning models to support clinical decision support, improved productivity, safety and quality, and evidence-based healthcare.
* Develop and deploy methodology and/or adapt existing and interpretable machine learning methods in novel and creative ways to meet the group’s research objectives.
* Utilise various analytic and statistical methodologies to evaluate, and interpret data.
* Recording study results and interpreting the findings in terms of their scientific significance.
* Health service performance advice.
* Communicate effectively and respectfully in the interests of good business practice, build appropriate collaborations and enhance CSIRO’s reputation by applying good scientific practice.
* Produce high quality scientific papers suitable for publication in quality journals and for presentation at national and international conferences.
* Work effectively as an integral member of a multi-disciplinary, geographically 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.
* Support and lead research projects and related activity including the negotiation of resource requirements.
* 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 in a relevant discipline area, such as statistics, applied mathematics, machine learning, data science, operations research, computer science, or engineering.
2. Demonstrated ability in solving real world scientific problems.
3. Ability to develop new methods to solve applied statistical/health data analytics/health system problems.
4. Proficiency with programming languages/packages, such as R and Python, including the ability to programme new analyses, clean and structure data, and develop and validate appropriate models.
5. **High level written and oral communication skills with the ability to represent the research team effectively internally and externally, including the presentation of research outcomes at national and international conferences.**
6. **The ability to work effectively as a member of a multi-disciplinary, geographically dispersed research team, and carry out independent individual research, to achieve organisational goals.**
7. A significant record of science innovation and creativity plus the ability to apply well developed research skills to scientific investigations.

## Desirable Criteria:

1. Previous experience working in the health domain, especially with clinical data.
2. Experience in developing successfully funded research proposals.

## Special Requirement:

The successful candidate will be asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits

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