

Position Description

Position Title:	Senior Research Fellow (Data Science)
Position Classification:	Level C
Position Number:	309701
Faculty/Office:	Faculty of Engineering and Mathematical Sciences
School/Division:	School of Physics, Mathematics and Computing
Centre/Section:	International Centre for Radio Astronomy Research (ICRAR)
Supervisor Title:	Senior Principal Research Fellow
Supervisor Position Number:	308479

Your work area

The International Centre for Radio Astronomy Research (ICRAR) is an equal joint venture established in 2009 between Curtin University and The University of Western Australia (UWA). ICRAR is one of the lead Australian organisations participating in the international Square Kilometre Array (SKA) Project. The Centre is engaged in research and training in radio astronomy, astrophysics, simulations, data intensive astronomy, engineering and SKA pre-construction and eventually construction activities. ICRAR has a very active education and outreach program and also works closely with international and Australian collaborators including partners from industry. ICRAR was independently assessed to be among the top five radio astronomy Centres in the world. The Centre is also a node of the ARC Centre of Excellence for All Sky Astrophysics in 3 Dimensions (ASTRO 3D). ICRAR strongly supports the principles of equity and diversity and for this position we would like to encourage in particular female applicants.

Reporting structure

Reports to: Senior Principal Research Fellow

Your role

You will use your skills and experience in advanced data science technologies to extract information from complex and sometimes very big data sets. You will contribute to our work within the SKA project in areas relevant to your data science expertise, but sometimes challenging and expanding into new and exciting areas and thus opening new research opportunities and opportunities to develop new skills. You will complement our Data Intensive Astronomy (DIA) team, which includes people with a wide range of expertise in software engineering, computer science, astronomy, algorithmic development and project management. You will be part of our Australian SKA software development team, which is using the Scaled Agile Framework (SAFe) methodology to plan and deliver contributions within this globally distributed project. In the data science domain, you will contribute to and lead various existing research projects inside and outside of astronomy and have the opportunity to develop new ones as well. You will also contribute to teaching and supervision of students.

Your key responsibilities

Take over and lead existing data science and machine learning projects with internal and external collaborators.

Complement the DIA team with your ML and AI skills and support researchers and other software developers within ICRAR, CSIRO and other partner institutes and companies.

Participate in the SKA software development activities during pre-construction and later also construction.

Participate and lead the development of components to integrate advanced data science methodologies into our existing workflow system.

Participate in translation and impact activities to identify opportunities, apply and promote your and ICRAR's expertise to other fields, either in science, industry or society.

Supervise or co-supervise Masters and PhD students as required.

Participate in the delivery of an existing machine learning teaching unit.

Other duties as directed or required.

Your specific work capabilities (selection criteria)

Degree in a scientific field such as computer science or software engineering or demonstrated equivalent competency. PhD is desirable but not mandatory.

Substantial and extensive experience in the application of advanced data science methodologies to complex data sets. Experience with more traditional scientific or statistical algorithms is desirable.

Demonstrated ability to identify, analyse and solve new and interesting research opportunities.

Demonstrated capacity to work collegially and collaboratively with globally distributed and diverse internal and external stakeholders that is aligned with the mission and vision of the team.

Experience in teaching and supervision.

Special requirements (selection criteria)

Willingness to undertake domestic and international travel as required.

Compliance

Workplace Health & Safety

All supervising staff are required to undertake effective measures to ensure compliance with the Occupational Safety and Health Act 1984 and related University requirements (including Safety, Health and Wellbeing Objectives and Targets).

All staff must comply with requirements of the Occupational Safety and Health Act and all reasonable directives given in relation to health and safety at work, to ensure compliance with University and Legislative health and safety requirements. Details of the safety obligations can be accessed at <http://www.safety.uwa.edu.au>

Inclusion & Diversity

All staff members are required to comply with the University's Code of Ethics, Code of Conduct and Inclusion and Diversity principles. Details of the University policies on these can be accessed at <http://www.hr.uwa.edu.au/policies/policies/conduct/code>, <http://www.web.uwa.edu.au/inclusion-diversity>.