POSITION DESCRIPTION

Position Title: Research Data Engineer
Organisation Unit: TERN
Position Number: New
Type of Employment: Part-time (0.3 FTE), Fixed-term until June 2019
Classification: Hwe Level 7

THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) contributes positively to society by engaging in the creation, preservation, transfer and application of knowledge. UQ helps shape the future by bringing together and developing leaders in their fields to inspire the next generation and to advance ideas that benefit the world. UQ strives for the personal and professional success of its students, staff and alumni. For more than a century, we have educated and worked with outstanding people to deliver knowledge leadership for a better world.

UQ ranks in the world's top universities, as measured by several key independent ranking, including the Performance Ranking of Scientific Papers for World Universities (43), the US News Best Global Universities Rankings (52), QS World University Rankings (47), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (65). UQ again topped the nation in the prestigious Nature Index and our Life Sciences subject field ranking in the Academic Ranking of World Universities was the highest in Australia at 20.

UQ has an outstanding reputation for the quality of its teachers, its educational programs and employment outcomes for its students. Our students remain at the heart of what we do. The UQ experience – the UQ Advantage – is distinguished by a research enriched curriculum, international collaborations, industry engagement and opportunities that nurture and develop future leaders. UQ has a strong focus on teaching excellence, winning more national teaching excellence awards than any other in the country and attracting the majority of Queensland's highest academic achievers, as well as top interstate and overseas students.

UQ is one of Australia's Group of Eight, a charter member of edX and a founding member of Universitas 21, an international consortium of leading research-intensive universities.

Our 50,000-plus strong student community includes more than 13,000 postgraduate scholars and more than 12,000 international students from 144 countries, adding to its proud 240,000-plus alumni. The University has about 7,000 academic and professional staff and a $1.8 billion annual operating budget. Its major campuses are at St Lucia, Gatton and Herston, in addition to teaching and research sites around Queensland and Brisbane city. The University has six Faculties and four University-level Institutes. The Institutes, funded by government and industry grants, philanthropy and commercialisation activities, have built scale and focus in research areas in neuroscience, biomolecular and biomedical sciences, sustainable minerals, bioengineering and nanotechnology, as well as social science research.
UQ has an outstanding track-record in commercialisation of our innovation with major technologies employed across the globe and integral to gross product sales of $11billion+ (see http://uniquest.com.au/our-track-record).

UQ has a rapidly growing record of attracting philanthropic support for its activities and this will be a strategic focus going forward.

Organisational Environment

TERN is an Australian Government initiative to enhance Australia’s environmental research effort. TERN coordinates a nationally distributed set of instrumentation and data, and information services which collectively contribute to meeting the needs of terrestrial ecosystem research and other users in Australia for land observing systems. The infrastructure also contributes to Australia’s role in international programs in areas such as global flux observing. TERN was established in 2009 by a National Collaborative Research Infrastructure Strategy (NCRIS) grant from the Australian Government Department of Education and Training (DoET). Through a number of extensions and renewals of its grant, TERN’s funding is currently in place until June 2019.

The TERN infrastructure investments are distributed widely and are coordinated and managed nationally by the TERN Office at the University of Queensland (UQ) in Brisbane. The capabilities of TERN are operated by institutions - termed Operators - under agreements with the TERN Office. A key strategic objective is to sustain TERN into the longer term.

Information about TERN may be accessed at http://www.tern.org.au.

Information for Prospective Staff

This position is based in the TERN Office at the University of Queensland (UQ) in Brisbane. Travel to other TERN facilities may be required as part of the position.

Information about life at UQ including staff benefits, relocation and UQ campuses is available at - http://www.uq.edu.au/current-staff/working-at-uq

DUTY STATEMENT

Primary Purpose of Position

The Research Data Engineer is part of the TERN data team working on data delivery projects. The successful applicant will enhance TERN’s data and modelling capability by processing data collected from different instruments, including Eddy covariance. The TERN data team is a dynamic multidisciplinary team and the successful applicant will work closely with the ecosystem science research community across TERN to develop data products to support their research.

Duties

Duties and responsibilities include, but are not limited to:

- Work in a multi-disciplinary team with backgrounds in ecology, earth science, computer science and information management.
• Contribute to the TERN data team business objectives and strategies and their planning and delivery.

• Develop, code, evaluate and maintain new and existing data processing methods for quality assurance, data corrections and product generation for different environmental sensors including carbon fluxes to reduce time lag between raw data collection and analysis ready data.

• Collaborate with the Flux community to identify site specific information to incorporate in data processing methods and models.

• Integration of flux tower data with other TERN data products.

• Contribute to technical writing for conferences and journals as well as internal documentation.

• Work in the cloud infrastructure to develop and host applications.

• Present work at conferences, workshops and office project meetings.

• Provide technical advice and support to the ecosystem science community.

• Any other duties as reasonably directed by the Data Science Program Leader.

Other
Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including but not exclusive to:

• the University’s Code of Conduct

• requirements of the Queensland occupational health and safety (OH&S) legislation and related OH&S responsibilities and procedures developed by the University or Institute/School

• the adoption of sustainable practices in all work activities and compliance with associated legislation and related University sustainability responsibilities and procedures

• requirements of the Education Services for Overseas Students Act 2000, the National Code 2007 and associated legislation, and related responsibilities and procedures developed by the University

Organisational Relationships

The position reports to the TERN Data Science Program Leader.
SELECTION CRITERIA

Essential

- A degree in atmosphere science, ecology, computer science, information technology, software engineering, remote sensing, environmental science or a related field.
- An in-depth knowledge and experience working in field measurements and/or analysis and interpretation of complex and diverse datasets.
- Experience in writing scientific software in python for data capturing, processing and visualisation.
- Experience in carbon flux data collection, processing and analysis.
- Experience with integration of datasets from different sources.
- Excellent interpersonal, written and oral communication skills.
- Experience in software version control (Git) and Wiki.
- Good understanding of research data management and metadata standards.
- Knowledge and working experience in different data formats, data types, data standards, metadata standards.

The University of Queensland values diversity and inclusion and actively encourages applications from those who bring diversity to the University. Please refer to the University’s Diversity and Inclusion webpage (http://www.uq.edu.au/equity) for further information and points of contact if you require additional support.

Accessibility requirements and/or adjustments can be directed to the contact person listed in the job advertisement.