POSITION DESCRIPTION

Position Title: Snr Software Engineer – Data Analytics
Organisation Unit: TERN
Position Number: 
Type of Employment: 
Classification: HEW 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 CWTS Leiden Ranking (32), the Performance Ranking of Scientific Papers for World Universities (40), the US News Best Global Universities Rankings (42), QS World University Rankings (47), Academic Ranking of World Universities (54), and the Times Higher Education World University Rankings (66). Excluding the award component, UQ is now ranked 45th in the world in the ARWU, and is one of the only two Australian universities to be included in the global top 50.

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 53,000-plus strong student community includes more than 16,400 postgraduate scholars and more than 17,000 international students from 135 countries, adding to its proud 260,000-plus alumni. The University has more than 6,600 academic and professional staff (full-time equivalent) and a $2.15 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 $11 billion+.

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 research infrastructure initiative to enhance Australia’s environmental research effort, particularly in the areas of biodiversity, land/terrain, and carbon/water. TERN measures and observes changes in Australia’s land ecosystems over time using remote sensing, field surveys and highly instrumented sites and the data is openly available to long-term terrestrial ecosystem researchers and other users in Australia and globally. TERN was established in 2009 by a National Collaborative Research Infrastructure Strategy (NCRIS) grant from the Australian Government Department of Education, Skills and Employment (DESE). Through a number of extensions and renewals of its grant, TERN’s project funding is currently in place until June 2022, with some post-project reporting requirements extending into 2023.

The TERN infrastructure investments are distributed widely under contracts to other universities and CSIRO and are coordinated and managed nationally by the TERN Project Office, located at the University of Queensland (UQ) in Brisbane. The latter is deemed the Lead Agent under the funding agreement. A key strategic objective is to sustain TERN into the longer term for the purpose of maintaining and growing Australia’s only systematically collected long-term national data streams from terrestrial ecosystems.

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

Information for Prospective Staff

This position is based in Brisbane, Travel to other TERN offices across Australia 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 Senior Software Engineer will develop, test and improve cloud-native software and platforms to streamline processing and analysing drone and ecosystem data. The position will work with software engineers and domain scientists across partner institutions and collaboratively-funded projects.

Duties

Duties and responsibilities include, but are not limited to:
• Develop cloud-native analytics platforms to manage and process drone and earth and environmental data;
• Write clear design specifications by studying requirements documents and users need;
• Maintain and improve existing codebases and peer review code changes;
• Design and develop web services and restful APIs;
• Work in the OpenStack cloud environment to build, configure and deploy applications as containers;
• Present work at conferences, workshops, project meeting and other forums;
• Other duties as required, appropriate to the level of the position.

Other
• Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including but not exclusive to:
  o the University’s Code of Conduct
  o 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
  o the adoption of sustainable practices in all work activities and compliance with associated legislation and related University sustainability responsibilities and procedures
  o 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 Services & Analytics Platform Lead.
SELECTION CRITERIA

- Degree qualification (IT, computer science, software engineering or related field) with at least 4 years work experience in software development and coding, and proven experience in writing production-grade cloud-native software and services; or an equivalent combination of relevant experience and /or education/training.
- Proficient in Python programming for web and data analytics/science;
- Experience in REST APIs and microservices architecture;
- Experience with event streaming and message queues (Apache Kafka, RabbitMQ);
- Ability to use a wide variety of open-source technologies and cloud services (experience with OpenStack is beneficial);
- Proven software development skills including the use of version control, configuration management, continuous integration and continuous delivery (CI/CD) in an Agile Environment;
- Experience in DevOps (Ansible) and container (Docker, Kubernetes) technologies;
- Demonstrated ability to work both independently and as a productive team member with excellent communication and interpersonal skills, within an environment where there are time constraints and the pressure of business need deliverables.

Desirable
- Previous experience developing software for the research sector.

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 for further information and points of contact if you require additional support.

Accessibility requirements and/or adjustments can be directed to recruitment@uq.edu.au.