POSITION DESCRIPTION

Position Title: Lead Data Engineer
Organisation Unit: Information Technology Services
Type of Employment: Continuing, full-time
Classification: Hew Level 8

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 well within the top 100 universities worldwide, measured through a number of major independent university rankings: the Academic Ranking of World Universities, Times Higher Education World University Rankings, US News Best Global Universities Rankings, QS World University Rankings and Performance Ranking of Scientific Papers for World Universities, and is indeed in the top 50 in some of these rankings. Over the past 3 years for which audited data are available UQ has attracted the highest (2013) or second highest (2012, 2014) amount of research funding of any Australian university.

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 230,000-plus alumni. The University has about 7,000 academic and professional staff and a $1.7 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://uniqquest.com.au/our-track-record).
UQ has a rapidly growing record of attracting philanthropic support for its activities and will have further success in this area as an important strategic aim going forward.

Organisational Environment

**The Division of Information Technology Services (ITS)** at The University of Queensland provides an information environment that supports the teaching, learning, research and engagement objectives of the University and contributes positively to the student experience and the University’s reputation, in line with our values of Service, Team, Accountability and Results. It comprises three major sections located across the University’s campuses: Academic Services, Enterprise Support and University Networks. Also located within ITS is the internationally recognised network security group, AusCERT, which provides internet security services throughout Australia and New Zealand. ITS manages core networks not only for the whole of The University of Queensland but also works with other Queensland universities to manage access to the national university network (AARNet). ITS also operates Supercomputers and many of the University’s largest servers.

For further information visit our website [www.its.uq.edu.au](http://www.its.uq.edu.au)

**Information for Prospective Staff**

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](http://www.uq.edu.au/current-staff/working-at-uq)

**DUTY STATEMENT**

**Primary Purpose of Position**

The position will play a key role in transformational initiatives at UQ. The position provides a high level of solution architecture, analysis, detailed design, development, support and system administration for key big data and analytics platforms to support advanced analytics capabilities within the University. The position is also responsible for leading teams of technical and analytical staff in projects to deliver sophisticated big data curation solutions to underpin complex data analytics initiatives.

**Duties**

Duties and responsibilities include, but are not limited to:

- Solution architecture, analysis, detailed design, implementation, installation, testing and maintenance of information systems and infrastructure to deliver and support big data and analytics services. This will generally involve ongoing operational support tasks for established technologies and processes.
- Undertake solution architecture, analysis, design, development, testing and project management in support of significant data analytics projects with regard to the professional qualifications and experience of the position.
- Manage team members to meet day to day operational and project management objectives. Conduct staff performance reviews, mentor team members, encourage open communication with staff, clearly define objectives and establish key performance indicators, identify training needs and address performance issues.
- Consult on the technical aspects of big data and analytics technologies, platforms and
services to Information Technology Services clients.

- Assist the unit manager in matters of budget preparation, development and improvement of team practices and processes, preparation of service level agreements and coordinating SLA activities, management of the unit, and strategic and long term planning

- Consult with clients and represent Information Technology Services on matters not directly related to technical issues, such as, staff selection and other University committees

- Investigate, evaluate and report on new equipment, systems, processes and standards

- Contribute architectural input to the implementation of big data and analytics platforms, and to governance frameworks and best practices for development and operational activities for those platforms.

- The position may be required to manage or participate in multiple concurrent projects or ongoing operational activities. Project teams will vary in size and team members may work concurrently on more than one project

- An employee may be required to carry out other duties within the scope of the classification and within the limits of their skill, competence and training

**Other**

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including:

- 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 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

Some positions may require the incumbents to work rotating shifts with appropriate allowances, or on a rotating roster not involving shift work as such. Some positions may require the incumbent to be available on-call outside of working hours, subject to payment of the prescribed allowance and overtime penalties if necessary. While staff will have a campus nominated as their principal campus, they may be required to work at any University Campus subject to the Travel and Transfer Policy (http://ppl.app.uq.edu.au/content/5.43.09-transfer-and-travel-between-university-locations).

**Organisational Relationships**

The position reports to the Manager, Analytics Data Services, and will provide day to day operational direction to staff at HEW 5, 6 and 7.
SELECTION CRITERIA

Essential

- Qualifications and training equivalent to an undergraduate degree in IT plus postgraduate qualifications or significant progress towards postgraduate qualifications with significant IT or business content; OR an equivalent combination of experience, education and training.
- Demonstrated ability to effectively manage people, projects, and budgets in the delivery of quality IT services to meet diverse client requirements in a timely and cost-effective manner, including experience in providing estimates to clients and technical leadership and mentoring to developers, systems analysts or technical engineers.
- Demonstrated ability to architect, analyse, design, implement, test and operate effective solutions based on modern cloud based services.
- Experience with database development including database design.
- Experience with agile project management methodologies, including SCRUM.
- Commitment to establishing collaborative relationships to deliver effective reusable curated data sets for the use of other teams at UQ.
- Well-developed interpersonal skills (including written and verbal communication) and the ability to liaise and collaborate with colleagues, clients and external agencies at all levels to achieve quality outcomes.
- Demonstrated ability to maintain a current working knowledge of relevant emerging technologies, methodologies and best practices and utilise it in implementing best practice solutions.
- Analytical skills sufficient to assess problems and propose appropriate solutions, including those that integrate a range of appropriate processes, systems, data and technologies.
- Must be self-motivated and able to work constructively, and in an organised and methodical way, to deliver effective solutions that meet organisational objectives with limited guidance in a team environment.

Highly Desirable

- Experience with architecture, implementation, data engineering and operation of cloud based Data Lake solutions, including metadata management and data cataloging.
- Experience with contract first API specification, including use of Open API (Swagger), RAML or similar API specification standards.
- Experience with development and operations in platform environments such as API Gateways, ESBs, Data Warehouse or ETL tools.
- Experience with DevOps practices and associated tools, such as: containerisation, automated testing, auto-scaling, continuous integration, continuous delivery, logging and monitoring.
- The technologies and tools used within the team are listed below. Please indicate what experience you have with any of those listed:
Integration development technologies such as SOAP and RESTful web services, JavaScript frameworks, Java / J2EE, Spring Boot / Spring Cloud / Dropwizard (or similar), XML (XQuery, XSLT, XSD etc), JSON.

- Python, R, SQL scripting
- Amazon Web Services (AWS) cloud services, particularly big data enabling services such as S3, Lambda, Kinesis, Glue, Step Functions, Firehose, EMR, Spark etc
- Message Queue and Streaming technologies.
- API Management platforms (API gateway, developer portal etc).
- Non-relational data store / indexing technologies, e.g., ElasticSearch or Amazon DynamoDB

The University of Queensland values diversity and social inclusion.

Employment opportunities are not limited by race, ethnicity, religion, disability, age, sexuality, gender or other protected attributes. Applications are encouraged from Aboriginal and Torres Strait Islander peoples. For further information please contact our Indigenous Employment Coordinator at: atsi_recruitment@uq.edu.au