POSITION DESCRIPTION

Position Title: Research Data Analyst (eLIPSE)
Organisation Unit: School of Mechanical & Mining Engineering
Position Number: 3038195
Type of Employment: Full time, Fixed term for 2 years.
Classification: HEW Level 6

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. In 2013, UQ attracted more Australian Research Council funding than any other Australian university or research body.

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, and a founding member of Universitas 21, an international consortium of leading research-intensive universities. UQ is also the largest university in Queensland.

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 215,000-plus alumni. The University has more than 7,000 academic and professional staff and a $1.6 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.

Organisational Environment

The Faculty of Engineering, Architecture and Information Technology (EAIT) has an excellent international reputation for innovative engineering education approaches. Building on a history of collaboration between the Faculty of Engineering, Architecture and Information Technology (EAIT) and the Faculty of Science, academic staff who have an interest in reimagining STEM learning and enabling innovation have formed the Centre for eLearning Innovations and Partnerships in Science and Engineering (eLIPSE). Housed within the School of Mechanical and Mining Engineering, the Centre acts as an incubator for innovative eLearning technologies supporting student learning and teaching excellence.

Research aimed at understanding the role that technology plays in supporting student learning and engagement allows eLIPSE to develop tools and innovative curriculum that are fit for purpose, aligned with UQ’s Strategic Plan, and mapped to a coherent and unified development framework that reduces redundant effort. This research contributes to UQ’s strategic effort to improve the student experience and will allow Executive Deans and Heads of School to derive reasonable, measurable metrics that can evidence improvements in student engagement and important learning outcomes.

The eLIPSE Centre has a growing portfolio of highly innovative eLearning tools that have emerged over the past 6 years of Flipped and Blended Learning innovation in Science and Engineering. These tools form a “digital ecosystem” that allows the capture of students’ digital traces which can be deployed to enhance student learning, particularly in very large classes utilising technology enhanced active learning http://www.elipse.uq.edu.au/projects. A key aspect of this position will be to assist the eLIPSE Leadership Team to ensure that a high standard of research underpins the direction of the design and evaluation of this “ecosystem” of digital learning support tools.

Through this research, eLIPSE continues to play a significant role in UQ’s Student Strategy http://student-strategy.uq.edu.au/strategy with a focus on Goal 2: Student-centred flexibility. A significant goal of the eLIPSE Centre is directed towards providing personalised feedback and analysis to students on how they are tracking with their learning. The work is being undertaken in collaboration with UQ’s Institute of Teaching and Learning Innovation (ITaLI).

Information about eLIPSE may be accessed on the Centre’s web site at http://www.elipse.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

DUTY STATEMENT

Primary Purpose of Position

The Research Data Analyst performs data analysis which underpins eLIPSE research and coordinates data collection and management for the Centre.
Duties

Duties and responsibilities include, but are not limited to the following:

Research and projects

- Perform high level statistical analyses and produce reports based on the Centre’s data collection, including the following:
  - Conducting mixed methods research – collecting, analysing and integrating both quantitative and qualitative data;
  - Identifying patterns in data for further investigation;
  - Visualising and report on data analyses;
  - Collaborating with academic researchers within the Centre; and
  - Collaborating with eLIPSE developers to develop algorithms for data analysis.
- Contribute to research design processes for the Centre.
- Manage the data collection, storage and data structures for the Centre.
- Manage access to the data collection, ensuring compliance with all ethics requirements.
- Obtain and archive analyses and reports prepared by other researchers.
- Coordinate the preparation of reports required by UQ Ethics Office on compliance with ethics approvals.
- Continuously develop the data management strategy for the Centre, and the documentation related to data management procedures.
- Keep abreast of developments in both technology and data management to inform new approaches to teaching and learning grounded in data evidence and analytical rigor.

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.

Organisational Relationships

The position reports to Associate Professor Carl Reidsema, the Director of the Centre for eLearning Innovations and Partnerships in Science and Engineering (eLIPSE).
SELECTION CRITERIA

**Essential**

- Honours degree with at least 2 years subsequent work experience in a research environment using complex data sets, OR an equivalent combination of relevant experience and/or education/training.
- Experience with manipulation and analysis of data sets, using strong statistical analytical skills and relational database experience.
- Ability to use/create tools for analysis/mining of data. This involves use of common packages (e.g. SPSS, NVivo, Leximancer) and may include writing simple software for data manipulation.
- Demonstrated ability to synthesise large amounts of data from a variety of sources to extract key themes.
- Demonstrated ability to create reports that include effective visual representations and relate key themes to research questions.
- Experience with quantitative data management processes, including data storage, security, retrieval, query and reporting, while maintaining transparency for key researchers.
- High-level problem-solving skills and an ability to be adaptive and innovative in developing and pursuing solutions.
- Highly-developed communication skills including the ability to communicate technical/statistical information in written, numerical, diagrammatic, statistical and verbal form.
- Highly-developed interpersonal skills, along with the ability to develop and maintain strong collaborative linkages with researchers.
- Demonstrated ability to plan, schedule and undertake high quality work to meet explicit deadlines and to collaborate within flexible teams to achieve outcomes.

**Desirable**

- Understanding of laws and regulations to protect privacy, confidentiality and cultural sensitivity; ethical data sharing; strategies for anonymising quantitative and qualitative data.
- Familiarity with machine learning or data mining techniques.
- Familiarity with the educational research environment.

The University of Queensland is committed to equity, diversity and inclusion.