

POSITION DESCRIPTION

Position Title:	Postdoctoral Research Fellow
Organisation Unit:	School of Information Technology & Electrical Engineering
Position Number:	New
Type of Employment:	Fixed-Term for 12 months, Full-Time
Classification:	Research Academic Level A

THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) is one of Australia's leading research and teaching institutions. For more than a century, we have been bringing together outstanding educators, researchers and innovators – across a range of disciplines – to inspire the next generation and to advance ideas that can benefit the world.

Today, UQ is [ranked among the world's leading universities](#) and we are consistently recognised as one of the top 5 universities in Australia.

Each year, we teach around 55,000 students across 6 faculties, located at our 3 beautiful campuses at St Lucia, Herston and Gatton – as well as online. We aspire to broaden the knowledge and skills of these students, so that they're equipped to achieve their professional goals and make a positive contribution to our society, and the world.

The University is also home to 8 research institutes and more than 100 separate research centres with an interdisciplinary community of more than 1500 researchers, who have come to UQ from all over the globe. This outstanding community of researchers is continuing to build upon UQ's long and proud tradition of discovery science, invention, innovation, translation and commercialisation.

At UQ, we recognise that our people are our greatest asset. As such, we seek to recruit innovative people who are passionate about helping us to advance our mission and broaden our impact.

Our culture is built on the things that we value most highly – the pursuit of excellence; creative and independent thinking; honesty and accountability; mutual respect and diversity; and providing support for our people. Through the promotion of these values, we're creating a culture that encourages our people to bring their very best, authentic self when they come to work at UQ.

School of Information Technology & Electrical Engineering

It is an exciting time to get involved with the School of Information Technology and Electrical Engineering (ITEE), located on UQ's St. Lucia campus. The School is ramping up its investment in teaching, research and engagement to create an inspiring, diverse and flexible workplace. The direction is backed by a bold, new strategic vision to ensure the School is at the forefront of meaningful research outcomes and pedagogy across its core impact areas of

health, data, automation and energy. Boasting strong student enrolments in professionally accredited programs, combined with world-class researchers and facilities, the School is focused on strengthening its position in the global computer science and engineering communities. By attracting the brightest minds and fostering a truly innovative and collaborative work environment, the School will develop global solutions to contemporary issues and mentor the leaders of tomorrow.

Within ITEE, the Robotics Design Laboratory (RDL) is a growing team of high-quality researchers with national and international recognition. The RDL considers holistic design of advanced robotic and dynamical systems to solve difficult technical challenges.

Our people are our greatest asset. We offer collaborative, inclusive work and study places, which are enriched by the significant diversity of our staff, students and community. We genuinely believe that creativity and innovation flourishes in an environment where people feel supported, valued and empowered. Mutual respect, inclusivity and accountability are at the cornerstone of UQ's culture.

The School is committed to supporting the career growth of women researchers and have a number of initiatives to support women in developing and achieving a fulfilling research career at the School.

Details of the School may be accessed on its website at <http://www.itee.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>

The University of Queensland [Enterprise Agreement](#) outlines the position classification standards for Levels A to E.

DUTY STATEMENT

Primary Purpose of Position

The Postdoctoral Research Fellow will contribute to innovative research developments within the scope of digital health. The project aims to devise new method for the effective and efficient information extraction from electronic medical records.

The position is part of a newly BDHP/MRFF funded research project that involves researchers at the University of Queensland, Metro North HHS and Metro South HHS (Queensland Health). The postdoc will be part of the [ielab](#) team, in the School of Information Technology and Electrical Engineering.

About the project

In the near future, all public hospitals in Queensland will share one integrated Electronic Medical Record (iEMR). It contains an extensive and rich repository of structured and unstructured information that could be used to facilitate clinical practice improvement and clinical research. However, it is extremely difficult and labour intensive to access this data in order to use it for these purposes. This research project will streamline this process that will not only be useful within Queensland, but to all health care providers that use similar EMRs, worldwide. The project will develop a new, efficient capability for data extraction from the iEMR. We will construct a robust data model from the existing iEMR database that collates and

indexes information from both the existing structured query language (SQL) fields and currently unindexed, but invaluable unstructured information.

Duties

The duties and responsibilities include, but are not limited to

Research

- Design, develop, and implement information extraction methods from structured and unstructured data contained in iEMRs.
- Investigate, evaluate, and improve the developed techniques for information extraction. This will include quantitative and qualitative evaluation, based on datasets and user studies with key stakeholders.
- Assist in the development of a robust data model that thoroughly describes the data contained in the iEMR.
- Prepare research publications and progress reports, and present work at international conferences.
- Participate in regular meetings with project stakeholders to discuss project objectives, methodology and outcomes.
- Participate in interactions and liaisons with research and industry collaborators.
- Assist academic staff with the supervision of research students (PhD, MPhil, Honors)
- Any other duties as reasonably directed by your supervisor.

Service and Engagement

- Develop and/or maintain external links by cultivating relationships with industry, government departments, professional bodies and the wider community.
- Contribute to internal service roles and processes, including participation in decision-making and service on relevant committees.
- Perform a range of administrative functions as required.

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 Dr. Guido Zuccon within the Data Science Discipline ([ielab](#) team) at the School of Information Technology and Electrical Engineering.

SELECTION CRITERIA

Essential

- A PhD (completed or near-completion) in the field of Information Retrieval, Natural Language Processing, or Machine Learning on Textual Data
- Demonstrated expert knowledge and experience in relevant empirical research methods, including information extraction, semantic search. Research experience with medical records data or other relevant domain-specific search will be beneficial and highly regarded.
- Demonstrated publication record in quality research outlets in relevant fields; examples include ACM SIGIR, ACM WSDM, The Web Conf, ACL, NAACL-HLT, EMNLP, AAAI, ACM TOIS, ACM TIST, TACL, AMIA, JAMIA, BMJ, JDOC, JASIST.
- Excellent written and oral communication skills.
- Advanced computer skills of implementing machine learning algorithms, data extraction pipelines, wrangling large-scale datasets, and showcasing the research results.
- The ability to work both independently in a research environment and as part of a cross-disciplinary research team.
- High level organizational skills, with demonstrated capacity to establish and achieve goals.
- Ability to build smooth liaisons and professional contact with academic and industrial collaborators.
- Experience in supervising research students (e.g., PhD, Mphil, Honors).

Qualification Verification

An appointment to this position is subject to the verification of the highest academic qualification from the conferring institution.

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.

This role is a full-time position; however flexible working arrangements may be negotiated.

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