POSITION DESCRIPTION

Position Title: Dermatology Informatics
Organisation Unit: UQ Diamantina Institute, Faculty of Medicine
Position Number: NEW
Type of Employment: Fixed Term, Full-time, until 31 Dec 2019
Classification: HEW 5

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 (45), QS World University Rankings (48), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (69). UQ again topped the nation in the prestigious Nature Index, and our Academic Ranking of World Universities result in the field of Life and Agricultural Sciences is 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://uniqquest.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.

**Faculty of Medicine**

The University of Queensland’s Faculty of Medicine is an internationally recognised provider of world-class education and research. The research-intensive Faculty has a gross budget of almost $300 million, employs approximately 1000 continuing and fixed-term staff (headcount), has a community of more than 4000 non-salaried academic appointees and around 3200 students (headcount).

The Faculty of Medicine offers Australia’s largest medical degree program for graduates and school-leavers. Undergraduate and postgraduate programs are available in the disciplines of Medicine, Health Sciences, E-Health, Mental Health, Biomedical Sciences and Public Health.

The Faculty possesses enormous strengths spanning research, teaching, industry engagement and clinical practice in disciplines ranging from the basic sciences, biomedical research and development, to clinical trials and public health. Research projects within the Faculty have already led to discoveries with far-reaching social and economic impacts, including the revolutionary Gardasil (TM) vaccine for cervical cancer (Professor Ian Frazer) and a drug discovery EMA401 (Professor Maree Smith), a first-in-class oral treatment for chronic pain which through Spinifex Pharmaceuticals led to Australia’s largest biotechnology commercialisation deal. Faculty staff include three highly cited authors, one Fellow of the Royal Society (FRS), three Fellows of the Australian Academy of Science (FAA) and 12 Fellows of the Academy of Health and Medical Sciences (AAHMS). The Faculty is a core member of Brisbane Diamantina Health Partners, the Brisbane-wide academic health science system.

Educational offerings in biomedical sciences, medicine and public health are informed and supported by research activity across a range of fundamental and clinical areas of importance including recognised strengths in cancer, skin diseases, brain and mental health, maternal and child health and genomics. Cutting-edge facilities such as the Herston Imaging Research Facility (HIRF), the UQ Centre for Clinical Research (UQCCR), our laboratories in the Translational Research Institute (TRI) and the new Centre for Children’s Health Research (CCHR) enable outstanding research outcomes and sharpen our understanding of cancer, autoimmunity, mental disorders, infectious diseases and neurological disease. Further details are available at [www.medicine.uq.edu.au](http://www.medicine.uq.edu.au).

**The University of Queensland Diamantina Institute**

The University of Queensland Diamantina Institute (UQDI) was established in 2007 and forms a major research centre within the Faculty of Medicine. The aim of the Institute is to develop a better understanding of the molecular and cellular basis of disease, and to translate that understanding into practical outcomes for patients. Based at the Translational Research Institute (TRI) at the Princess Alexandra Hospital teaching campus in Brisbane, UQDI has more than 300 researchers, clinical academics and students who work closely with hospital clinicians in the areas of cancer, immunology, genomics and other areas of translational medicine. UQDI has particular research strengths in skin cancers, blood cancers and autoimmunity.
UQDI has a mission of translating discoveries into better treatments and has a strong record of achievement, most notably in the development of cancer therapies: research at UQDI by Professor Ian Frazer AC FRS led to the development of the cervical cancer vaccine Gardasil. UQDI is the largest partner in the TRI, which is an extremely well-equipped translational biomedical research institute, with outstanding laboratories and core facilities for imaging, microscopy, flow-cytometry and in vivo models of disease. Its close affiliation with clinical units at Princess Alexandra Hospital provides UQDI with a significant strategic advantage in near-patient, translational research.

UQDI is part of The University of Queensland, one of the top Australasian universities, and internationally is ranked in the top 100 universities in all major independent rankings. UQDI academics are part of a vibrant and highly successful academic institution optimising their chances of research success. Details of the research interests of academic staff may be accessed on the Institute’s web site at at http://www.di.uq.edu.au/research

Dermatology Informatics

The dermatology informatics program of work includes:

- The use of advanced imaging of the skin (dermoscopy, reflectance confocal microscopy, and 3D Total Body Photography).
- The integration of imaging and results into health services digital infrastructure including electronic medical records (EMRs) and picture archiving and communication systems (PACS).
- The use of teledermatology network to distribute images and results across geographical locations.
- The development of standards for dermatology imaging.
- The use of Artificial Intelligence to diagnose cutaneous disease.
- The use of security mechanism to protect patient privacy of images (and other information) at in transit and at rest

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

To provide technology support and research support for the dermatology informatics program of work being conducted within the UQ Diamantina Institute’s Dermatology Research Centre.

Duties

Duties and responsibilities include, but are not limited to:

- Day-to-day maintenance of the imaging infrastructure and network
- Proactively monitor the infrastructure and network for impediments to service and manage remediation
- Investigate and rectify problems with the infrastructure and network in a timely manner, following up and/or escalating as appropriate to ensure resolution.
• Contribute to the installation of and configuration of imaging infrastructure and network in collaboration with vendor and partner organisation including configuration management
• Liaise with IT staff within UQ, the vendors and partner organisations as necessary to resolve problems, pursue developments and build working relationships.
• Maintain relevant technical documentation of infrastructure and network.
• Conduct literature searches and reviews.
• Testing of system upgrades prior to installation in the production environment.
• Installation and training of machine learning algorithms for image classification.
• Preparing training, validation and testing datasets for machine learning
• Data cleaning
• Adopt and promote sound cyber security practices in compliance with UQ’s Cyber Security Policy and according to cyber security procedures and standards developed by the University or Division.
• Other duties as reasonably directed by your supervisor

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 Liam Caffery, Director of Dermatology Informatics, under the overarching supervision of Prof H. Peter Soyer.

SELECTION CRITERIA

Qualifications
Essential
• A degree relevant to the area of employment, with preference given to candidates with a relevant information technology, engineering or computer science degree
• Monitoring and investigation of technical problems
• Installation and maintenance of hardware and software
• Systematic problem solving
• Ability to rapidly learn new software and hardware at a detailed level
• Ability to develop a testing regimes to ensure system upgrades and enhancement do not impair functionality.
• High level of writing ability sufficient to prepare technical document and academic manuscripts
• High level of ability with reference management software e.g. Endnote
• Knowledge of, or the ability to quickly gain knowledge of: TCP/IP networking including aspects of hardware, software, addressing and routing, Computing and networking hardware, including PCs, wired and wireless networking, Relational database management systems, Scripting and programming languages, LINUX operating system
• The ability to manipulate images using a combination of scripting and software application and libraries
• 3D imaging formats and manipulation
• Practical technical experience in a networked environment
• Experience in configuring a variety of hardware and software
• High level of personal motivation and initiative
• Demonstrated ability to work both individually and as part of a multidisciplinary team
• Aptitude for both practical, hands-on work and systematic thinking
• Effective personal time management and prioritisation of competing tasks; flexibility and adaptability in responding urgent issues.
• Willingness to travel to sites around Queensland as necessary
• Excellent interpersonal communication skills with the ability to form positive relationships with immediate colleagues and technical, clinical and research staff outside of the centre
• Current Open Class C driver’s license

Desirable
• Experience of the University administrative and work environment.
• Experience of the Queensland Health administrative and work environment
• Detailed understanding of technical requirements and issues
• Experience with the Experience in Digital Image and Communication in Medicine (DICOM)
• Experience in Health Level 7 (HL7)
• Experience with Artificial Intelligence
• Experience with Google Cloud Healthcare
• An interest in healthcare research
• An interest in contributing to research projects

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.

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

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