Position Description

Senior Research Associate (AI/Machine Learning)

Position Number: 00085396
Position Title: Senior Research Associate
Date Written: June 2020

Faculty / Division: UNSW Medicine
School / Unit: South West Sydney Clinical School
Position Level: Level B

ORGANISATIONAL ENVIRONMENT

UNSW is currently implementing a ten-year strategy to 2025 and our ambition for the next decade is nothing less than to establish UNSW as Australia's global university. We aspire to this in the belief that a great university, which is a global leader in discovery, innovation, impact, education and thought leadership, can make an enormous difference to the lives of people in Australia and around the world.

Following extensive consultation in 2015, we identified three strategic priority areas. Firstly, a drive for academic excellence in research and education. Universities are often classified as 'research intensive' or 'teaching intensive'. UNSW is proud to be an exemplar of both. We are amongst a limited group of universities worldwide capable of delivering research excellence alongside the highest quality education on a large scale. Secondly, a passion for social engagement, which improves lives through advancing equality, diversity, open debate and economic progress. Thirdly, a commitment to achieving global impact through sharing our capability in research and education in the highest quality partnerships with institutions in both developed and emerging societies. We regard the interplay of academic excellence, social engagement and global impact as the hallmarks of a great forward-looking 21st century university.

To achieve this ambition, we are attracting the very best academic and professional staff to play leadership roles in our organisation.

VALUES IN ACTION: OUR UNSW BEHAVIOURS

UNSW recognises the role of employees in driving a high-performance culture. The behavioural expectations for UNSW are below.

Demonstrates Excellence	Delivers high performance and demonstrates service excellence.
Drives Innovation	Thinks creatively and develops new ways of working. Initiates and embraces change.
Builds Collaboration	Works effectively within and across teams. Builds relationships with internal and external stakeholders to deliver on outcomes.
Embraces Diversity	Values individual differences and contributions of all people and promotes inclusion.
Displays Respect	Treats others with dignity and empathy. Communicates with integrity and openness.

OVERVIEW OF RELEVANT AREA AND POSITION SUMMARY

UNSW Medicine is a national leader in learning, teaching and research, with close affiliations to a number of Australia's finest hospitals, research institutes and health care organisations. With a strong presence at UNSW Kensington campus, the faculty have staff and students in teaching hospitals in Sydney as well as regional and rural areas of NSW including Albury/Wodonga, Wagga Wagga, Coffs Harbour and Port Macquarie.

The South Western Sydney (SWS) Clinical School is based at Liverpool and Bankstown-Lidcombe Hospitals, Sydney. The School is the fastest growing School within UNSW Medicine and is renowned for its excellence in undergraduate teaching and clinical training as well as in the range of research areas such as Cancer, Clinical Science, Community and Population Health, Early Years/Childhood Health, Injury and Rehabilitation and Mental Health.

We are establishing a Stroke and Neuroscience research team based at South Western Sydney Clinical School. The research team will work on AI/machine learning methods on brain imaging data (for example, detection of acute ischemia).

The Senior Research Associate (AI/Machine Learning) will be involved in developing new machine learning algorithms (CT and MRI). The role of Senior Research Associate (AI/Machine Learning) will work closely with senior researchers and provide support across several ongoing projects in various areas of the research. The Senior Research Associate (AI/Machine Learning) will drive a research project in the SBC, experimentally support other students and researchers in the group, help define and drive new research directions aligned with the overall goals of the group and the Centre.

The role of Senior Research Associate (AI/Machine Learning) reports to the Professor of Medicine & Brain Imaging Laboratory Manager and has no of direct reports.

RESPONSIBILITIES

Specific responsibilities for this role include:

- Play a major role in all aspects of major research projects including management and/or leadership of a research team

- Lead the preparation, research analysis, and produce/contribute to conference abstracts and publications for submission to peer-reviewed journals

- Publish and present research results at academic/industry national and international conferences

- Provide scholarly supervision and mentor undergraduate, honours level and post graduate research students and actively provide guidance on research methods

- Design, develop and lead research ensuring all research is conducted to methodological and ethical standards

- Formulate study design, programmes, and implementation timelines

- Collaborate effectively and maintain strong relationships with relevant researchers within the institution, stakeholders and policy makers and contribute to the teaching program within the field of research expertise

- Develop proposals for national competitive research grant funding

- Complete administrative functions primarily connected to area of research

- Cooperate with all health and safety policies and procedures of the university and take all reasonable care to ensure that your actions or omissions do not impact on the health and safety of yourself or others.

SELECTION CRITERIA

- A degree in Science, Engineering, Computer Science or equivalent with relevant experience; or extensive experience and management expertise; or an equivalent combination of relevant experience and/or education/training.

- Proven track record in publishing scientific research papers in immunology and demonstrated experience in grant writing and ethics submission

- Excellent oral and written communication skills, attention to detail and the ability to liaise effectively with all levels of staff, students, management, collaborators, and members of the public with relevant data analysis skills

- Proven ability in working effectively as a member of a multidisciplinary team and in supervising technical staff and students

- Demonstrated experience in relevant industry and/or in establishing/maintaining research partnerships with industry

- Experience with medical image processing and annotation

- Experience managing large volume of DICOM data and familiarity with PACS

- Programming experience (any language) and an interest in developing and applying programming skills

- Ability to participate in production of research publications

- Ability to work autonomously with considerable independence

- Familiarity with clinical trials and patient confidentiality rules and regulations

- Experience handling clinical trial data and preparation of data for analysis by external parties

- Previous experience working in a multidisciplinary team environment in a technical capacity

- Strong written and verbal communication skills for managing external site relations

- Strong organisational and time management skills, including the ability to prioritise workloads, work well under pressure, and organise own work and others to meet deadlines

- Demonstrated ability to be flexible and adaptable in a changing environment

- Excellent stakeholder engagement skills, including managing competing demands and stakeholder groups

- Knowledge of health and safety responsibilities and commitment to attending relevant health and safety training.

It is not the intention of the position description to limit the scope or accountabilities of the position but to highlight the most important aspects of the position. The aspects mentioned above may be altered in accordance with the changing requirements of the role.