Position Description

Centre for Youth Mental Health
Medicine, Dentistry and Health Sciences

Research Fellow – Artificial Intelligence in Digital Youth Mental Health

POSITION NO 0061726

CLASSIFICATION Level B

WORK FOCUS CATEGORY Research Focused

SALARY $114,645 - $136,136 p.a. (pro rata)

SUPERANNUATION Employer contribution of 17%

WORKING HOURS Full time position (1.0 FTE)

BASIS OF EMPLOYMENT Fixed term position available for 12 months

Fixed term contract type: External Funded

OTHER BENEFITS http://about.unimelb.edu.au/careers/working/benefits

CONTACT FOR ENQUIRIES ONLY Dr Imogen Bell;
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A/Prof Shane Cross
Shane.cross@orygen.org.au

For information about working for the University of Melbourne, visit our websites:
about.unimelb.edu.au/careers
Position Summary

Orygen is the world’s leading research and knowledge translation organisation focusing on mental ill-health in young people.

At Orygen, our leadership and staff work to deliver cutting-edge research, policy development, innovative clinical services, and evidence-based training and education to ensure that there is continuous improvement in the treatments and care provided to young people experiencing mental ill-health. Orygen Digital, the digital mental health division of Orygen, designs, delivers and evaluates evidenced-based digital services for youth mental health, including Moderated Online Social Therapy (MOST), virtual reality (VR), and just-in-time mobile interventions. Orygen Digital requires an experienced individual to join a growing team of researchers, clinical psychologists, software engineers, writers, artists, young people and frontline mental health professionals to assist in the development and application of artificial intelligence-based approaches within various digital platforms, and the application of novel AI-based trial designs to evaluate new interventions.

The University of Melbourne has an agreement with Orygen for designated employees to be made available to undertake activities for Orygen, and this arrangement will apply to you. University employees working at Orygen are required at all times to continue to adhere to University policies, procedures, regulations and statutes, as well as to Orygen policies and procedures (including Orygen’s delegations of authority framework which can be found at http://staff.orygen.org.au/), but the University’s policies and procedures shall prevail in the event of any inconsistency. For the period of participating in activities at Orygen, you will be subject to the reasonable control and direction of Orygen. You consent to the University disclosing to Orygen your personal employment information solely for the purposes of facilitating your secondment to Orygen, and that such disclosure will not be a breach of any of your privacy rights.

We are seeking a Research Fellow - Artificial Intelligence to play a pivotal role in multiple projects focusing on the development and evaluation of AI-driven approaches for youth mental health treatment. The role encompasses enhancing ongoing research initiatives, coordinating AI partnerships with external groups, and spearheading new projects within the AI research domain. Collaborating closely with the leadership team at Orygen Digital, the Research Fellow will be instrumental contributing to writing grant proposals and publishing research articles relating to AI in mental health. The position involves innovatively designing trial protocols to test digital interventions, potentially overseeing junior staff in executing research projects and clinical trials. Additionally, the Fellow will be responsible for formulating and implementing protocols and management strategies for both AI research initiatives and clinical operations.

This position reports to Professor Mario Alvarez-Jimenez, with a dotted line to X.

1. Key Responsibilities

1.1 RESEARCH AND RESEARCH TRAINING

- Actively assist in conducting high-impact research in the field of AI for digital mental health treatments, including but not limited to machine learning, natural language processing, generative AI, and predictive analytics.

- Actively assist in conducting high-impact research in the field of novel dynamic research designs to develop and optimise adaptive interventions in digital mental health.
• Lead and contribute to the development of grant proposals with a focus on AI and novel research designs (e.g., multimodal adaptive interventions, optimisation trials, AI driven testing and optimisation) and digital mental health and secure funding for ongoing research.

• Develop and implement AI algorithms and models to personalise digital mental health interventions and analyse complex datasets related to mental health disorders and treatment outcomes.

• Lead and contribute to the development and establishment of world-class collaborations in the field of AI and adaptive, dynamic research methodologies and interventions.

• Collaborate with and coordinate internal and external interdisciplinary teams comprising clinical psychologists, data scientists, and healthcare professionals to design and evaluate AI-based interventions for mental health.

• Publish and present research findings in high-quality scientific journals and conferences.

• Actively lead and develop the new AI and optimisation trials stream both internally within the University at Orygen Digital and at a national and international level.

• Assist in the engagement of, and maintenance of relationships with, key stakeholders.

• Collaborate and support CYMH and Orygen Digital related projects and research staff as required.

• Development of an academic research profile in the areas of Digital technology, AI, and methods to and evaluate adaptive interventions and Youth Mental Health, including identifying sources of funding and applying for grants and fellowships.

• Mentor and supervise junior researchers and students engaged in related research projects.

1.2 LEADERSHIP AND SERVICE

• Actively participate in community and professional activities including research seminars and conferences.

• Actively participate in key aspects of engagement within CYMH and Orygen.

• Undertake administrative, monitoring and reporting functions as required by the research funders.

• Participation in team meetings.

• Liaison with project researchers regarding research and development topics.

• Positive engagement in learning and career development of self and others.

• Effective demonstration and promotion of Orygen and University values including diversity and inclusion and high standards of ethics and integrity.

• Occupational Health and Safety (OHS) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 4.

2. Selection Criteria

2.1 ESSENTIAL
• A Ph.D. in Computer Science, Data Science, Mathematics, Psychology, Neuroscience, or a closely related field, with a strong focus on AI and machine learning.
• Demonstrated experience in applying state of the art AI and machine learning frameworks and techniques in the health sector, preferably mental health, including experience using relevant software development (such as Python).
• Knowledge of innovative research methodologies applicable to adaptive digital interventions in mental health including optimisation trials designs such as Micro-Randomized Controlled Trials, hybrid experimental designs, SMART trials, and the Multiphase Optimization Strategy (MOST) framework.
• High level verbal and written communication skills with the ability to clearly explain complex AI models and techniques with a range of people across all levels of the organisation.
• Strong publication record in relevant scientific journals.
• Strong evidence of ability and desire to build an academic career trajectory, including track record of publishing in high impact scientific journals and participation in research projects and grants.
• Demonstrated ability to supervise or co-supervise and mentor undergraduate, honors and/or PhD students.
• Highly motivated and enthusiastic researcher with a strong interest in digital technology and youth mental health.
• Outstanding interpersonal and communication skills and capacity to initiate, manage and maintain partnerships and collaborations.
• Demonstrated ability to work independently and collaboratively in a team to meet agreed deadlines and achieve project goals.
• Demonstrated ability to articulate research or project outcomes through presentation in a public forum including conferences.
• Experience in writing grants for external funding.

2.2 DESIRABLE
• Experience in developing AI-based tools for use in youth mental health contexts.
• International collaborations in mental health AI research.

2.3 SPECIAL REQUIREMENTS
• Unrestricted right to live and work in Australia.
• Any offer of employment is conditional upon receipt and maintenance of a valid Working With Children Card and a satisfactory Police Check.
• All workplaces and the surrounding site are non-smoking environments.

3. Equal Opportunity, Diversity and Inclusion
The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion and reward on the basis of merit.
The University is committed to all aspects of equal opportunity, diversity, and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the University’s People Strategy 2015-2020 and policies that address diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people’s age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability, and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous desire to strive for excellence and reach the targets of Growing Esteem.

4. Occupational Health and Safety (OHS)

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

https://safety.unimelb.edu.au/people/community/responsibilities

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

5. Other Information

5.1 CENTRE FOR YOUTH MENTAL HEALTH

www.cymh.unimelb.edu.au

In January 2009 the University of Melbourne established a new Centre for Youth Mental Health (CYMH) within the Faculty of Medicine Dentistry and Health Sciences, where the academic and professional staff who are provided to Orygen are now based. All NHMRC and ARC Grants to be used for Orygen activities are managed within CYMH.

The creation of this academic and administrative structure reflects the multidisciplinary nature of this field of inquiry and knowledge, and its growing scientific and practical breadth and significance. This is only the fourth such supra-departmental structure to be created in the faculty and there is no parallel to date anywhere else in Australia.

The Chair of the Centre for Youth Mental Health is Professor Patrick McGorry and the Chief Operating Officer is Mr John Moran. Reporting arrangements are through the University of Melbourne structure with a direct report to Professor Jane Gunn, Dean of the Faculty.

5.2 ORYGEN
Orygen is the world’s leading research and knowledge translation organisation focusing on mental ill-health in young people.

Further information available at https://www.orygen.org.au/About/About-Us

5.3 FACULTY OF MEDICINE, DENTISTRY AND HEALTH SCIENCES

www.mdhs.unimelb.edu.au

The Faculty of Medicine, Dentistry & Health Sciences has an enviable research record and is the University of Melbourne’s largest faculty in terms of management of financial resources, employment of academic and professional staff, teaching of undergraduate and postgraduate (including research higher degree) students and the conduct of basic and applied research. The faculty’s annual revenue is $628m with approximately 55% of this income related to research activities.

The faculty has a student teaching load in excess of 8,500 equivalent full-time students including more than 1,300 research higher degree students. The faculty has approximately 2,195 staff comprising 642 professional staff and 1,553 research and teaching staff.

The faculty has appointed Australia’s first Associate Dean (Indigenous Development) to lead the development and implementation of the Faculty’s Reconciliation Action Plan (RAP), which will be aligned with the broader University – wide plan. To enable the faculty to improve its Indigenous expertise knowledge base, the Faculty’s RAP will address Indigenous employment, Indigenous student recruitment and retention, Indigenous cultural recognition and building partnerships with the Indigenous community as key areas of development.

5.4 THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville is recognised as the hub of Australia’s premier knowledge precinct comprising eight hospitals, many leading research institutes, and a wide-range of knowledge-based industries. With outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded.

Further information about working at The University of Melbourne is available at http://about.unimelb.edu.au/careers

5.5 ADVANCING MELBOURNE

The University’s strategic direction is grounded in its purpose. While its expression may change, our purpose is enduring: to benefit society through the transformative impact of education and research. Together, the vision and purpose inform the focus and scale of our aspirations for the coming decade.

Advancing Melbourne reflects the University’s commitment to its people, its place, and its partners. Our aspiration for 2030 is to be known as a world-leading and globally connected Australian university, with our students at the heart of everything we do.
We will offer students a distinctive and outstanding education and experience, preparing them for success as leaders, change agents and global citizens.

We will be recognised locally and globally for our leadership on matters of national and global importance, through outstanding research and scholarship and a commitment to collaboration.

We will be empowered by our sense of place and connections with communities. We will take opportunities to advance both the University and the City of Melbourne in close collaboration and synergy.

We will deliver this through building a brilliant, diverse, and vibrant University community, with strong connections to those we serve.

The means for achieving these goals include the development of the University of Melbourne’s academic and professional staff and the capabilities needed to support a modern, world-class university. Those means require a commitment to ongoing financial sustainability and an ambitious infrastructure program which will reshape the campus and our contribution to the communities we engage with. This strategy, and the priorities proposed, is centred around five intersecting themes: place, community, education, discovery and global.

5.6 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at https://about.unimelb.edu.au/strategy/governance