



## POSITION DESCRIPTION

**Centre for Youth Mental Health**  
Faculty of Medicine, Dentistry and Health Sciences

# Research Fellow – Data Scientist / Biostatistician (Health Systems)

<b>POSITION NO</b>	0057171
<b>CLASSIFICATION</b>	Research Fellow, Level A
<b>WORK FOCUS CATEGORY</b>	Academic Specialist
<b>SALARY</b>	\$77,171- \$104,717p. a.
<b>SUPERANNUATION</b>	Employer contribution of 17%
<b>WORKING HOURS</b>	Full-time
<b>BASIS OF EMPLOYMENT</b>	Fixed-term for one year Fixed-term contract type: Externally funded
<b>OTHER BENEFITS</b>	<a href="https://about.unimelb.edu.au/careers/staff-benefits">https://about.unimelb.edu.au/careers/staff-benefits</a>
<b>HOW TO APPLY</b>	Online applications are preferred. Go to <a href="http://about.unimelb.edu.au/careers">http://about.unimelb.edu.au/careers</a> , select the relevant option ('Current Opportunities' or 'Jobs available to current staff'), then find the position by title or number.
<b>CONTACT FOR ENQUIRIES ONLY</b>	Dr Caroline Gao Tel +61 467 671 142 Email <a href="mailto:caroline.gao@orygen.org.au">caroline.gao@orygen.org.au</a>  <i>Please do not send your application to this contact</i>

For information about working for the University of Melbourne, visit our website:  
[about.unimelb.edu.au/careers](http://about.unimelb.edu.au/careers)

## *Acknowledgement of Country*

The University of Melbourne acknowledge the Elders, and descendants of the Wurundjeri people who have been and are the Custodians of these lands. We acknowledge that the land on which we meet was the place of age-old ceremonies, of celebration, initiation and renewal, and that the local Aboriginal peoples have had and continue to have a unique role in the life of these lands.

## *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 is a not-for-profit company with three Members: the Colonial Foundation, The University of Melbourne and Melbourne Health. 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 of Melbourne employees working in the Centre for Youth Mental Health (CYMH) (Faculty of Medicine, Dentistry and Health Sciences) 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.

The Research Fellow - Data Scientist / Biostatistician is required to apply modern and innovative methods of data analysis and simulation to datasets collected at Orygen and its partner organisations. The primary focus of this position is to help identify opportunities to improve the financing and organising of mental health services for young people through the provision of novel data-driven insights into topics that may include but are not limited to:

- ▶ extract information and conduct statistical analysis using different types of data such as survey data and administrative healthcare records;
- ▶ develop machine learning algorithms for prediction of health outcomes
- ▶ using data-driven techniques to identify subgroups of young people with distinctive pathways through care and health service utilisation behaviours; and
- ▶ contributing to the development of statistical analysis plans and drafting of reports and research papers

In undertaking this work, the Data Scientist / Biostatistician will leverage a significant body of prior and ongoing work (datasets, code, user interfaces, protocols and frameworks) from Orygen's Health Service and Outcomes Research (HSOR) team. The Data Scientist / Biostatistician will work under the supervision of and be supported by the HSOR team's Senior Biostatisticians to conduct data wrangling/processing, undertake statistical analysis and machine learning models. The Data Scientist / Biostatistician will contribute to a few key projects within the HSOR team. One of the key project is the the 5W Research Programme- The Who, Why, What, Where, and When of Primary Youth Mental Health Care, funded by a NHMRC Partnership Grant.

The 5W Project (funded through a NHMRC Partnership grant) involves partnerships with Orygen, *headspace* National, Ambulance Victoria, and the Department of Health and Human Services, Victoria alongside leading Australian academics. The main aims are to apply statistical and machine learning models to linked population-based health and administrative datasets in order to identify the subgroups of young people with mental health concerns, mapping risks for poor outcomes, and determine whether their treatment needs are currently being met. The project will also involve simulating alternative configurations of primary youth mental health services and undertaking comparisons for acceptability, equity and value for money, and using prediction algorithms to develop a Shared Decision Making Aid.

## 1. Key Responsibilities

The University of Melbourne sets 'Minimum Standards for Academic Levels' (MSALs) which are expected from academic staff. The levels are differentiated by level of complexity, degree of autonomy, leadership requirements of the position, and level of achievement of the academic and may be amended from time to time.

Below is the MSALs for Level A academic staff. The Key Responsibilities, outlined in this section, are to be read in conjunction with this MSAL.

- ▶ A Level A Academic will work with the support and guidance from more senior Academics and will work under the supervision of an Academic at Level B and above.
- ▶ A Level A Academic is expected to develop their expertise in teaching, scholarship and/or research with an increasing degree of autonomy and may work with limited supervision and/or as part of a team.
- ▶ A Level A Academic will contribute to teaching at the University (at a level appropriate to their skills and experience) and/or undertake research and/or engage in professional activities appropriate to their profession or discipline. The Academic will undertake administration primarily relating to their activities with the Faculty. The contribution to teaching and supervision of students of Level A Academics will be primarily at undergraduate and graduate diploma level. The results of research conducted may be published as sole author or in collaboration

### 1.1 RESEARCH AND RESEARCH TRAINING

- ▶ Participate in research as a member of the research team.
- ▶ Report and provide updates on the data analysis plans and outcomes to the other researchers and investigators on projects.
- ▶ Overseeing data entry, cleaning and management.
- ▶ Contribute to data analysis and modelling using specialised programs, particularly R.
- ▶ Active participation in the communication and dissemination of research, where appropriate.
- ▶ Contribute to publications arising from scholarship and research, such as publication of books and in peer-reviewed journals.

### 1.2 LEADERSHIP AND SERVICE

- ▶ Provide service to the University and actively participate in meetings and committees as appropriate.

- ▶ Actively participate in the project team and/or division meetings and contribute to planning activities or committee work to support capacity-building.
- ▶ Positive engagement in learning and career development of self and others.
- ▶ Effective demonstration and promotion of University and Orygen values including diversity and inclusion and high standards of ethics and integrity.
- ▶ Participate in community and professional activities including attendance and presentations at conferences and seminars.
- ▶ Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 3 and 4.
- ▶ Allocate and monitor workload and address associated issues in a timely manner.

### 1.3 RESPONSIBILITY AND COMPLIANCE

- ▶ Maintain a sound knowledge of current University Policy and Procedures, and reliably follow these or provide compliant advice to others;
- ▶ Reliably follow communications protocols and/or policies as appropriate.
- ▶ Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in Section 5.
- ▶ Behavioural Expectations - All staff are expected to maintain the following behaviours:
  - ▶ Treat everyone equitably; act fairly with staff and demonstrate respect for diversity
  - ▶ Be an effective team player who is cooperative and gains the trust and support of staff, peers and clients through collaboration.
  - ▶ Create ethics applications and report to the ethics committees

## 2. Selection Criteria

In order to be considered for interview by the Selection Panel, applicants must address the following Criteria in their application. Please visit the University website how to address [Essential Selection Criteria](#)

### 2.1 ESSENTIAL

- ▶ A Master or PhD qualification in biostatistics, statistics, data science, epidemiology, economics, population health or other quantitative areas such as psychology, neuroscience or ecology.
- ▶ Demonstrated ability to apply research methodologies and quantitative data analysis.
- ▶ Experiences in developing and/or applying machine learning models for clustering and prediction tasks.
- ▶ Highly developed R programming skills including data processing/wrangling, statistical and/or simulation models, and data visualisation.
- ▶ Excellent interpersonal, written and verbal communication skills, including the ability to communicate with researchers and other stakeholders who may have limited experience and understanding of statistics and modelling.
- ▶ Highly developed organisational skills and demonstrated ability to set priorities and meet project deadlines as well as excellent organisational and time management skills.

- ▶ Demonstrated ability to work independently and collaboratively in a team to achieve project goals.

## 2.2 DESIRABLE

- ▶ Demonstrated knowledge or experience with any advanced programming skills such as functional programming, object-oriented programming, literate programming with markdown, interactive visualisation or R package development.
- ▶ Familiarity with and commitment to open science principles.
- ▶ Ability to identify key research issues and priorities from the literature and from Orygen policy and to determine how these might be addressed by simulation models and analysis of available data.
- ▶ Experience with processing and/or modelling spatial and temporal data.
- ▶ A background in health and health services research.
- ▶ Ability and desire to build an academic career trajectory, including a track record of publishing in scientific journals and participation in research projects and grants.

## 2.3 SPECIAL REQUIREMENTS OF THE ROLE

- ▶ Unrestricted right to work in Australia.
- ▶ All Orygen sites are healthcare facilities. In line with Mandatory Vaccination Directions, all Orygen staff are required to be fully vaccinated (three vaccinations) against COVID-19. This requirement includes Centre for Youth Mental Health, University of Melbourne employed staff.
- ▶ This position requires the incumbent to hold a current and valid Working with Children Check and to complete a Police Records check.
- ▶ CYMH/Orygen is located over several metropolitan and regional locations, staff may be required to travel to, or work from, other sites and campuses as required.
- ▶ Some out of hours work may be required.

## 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 Advancing Melbourne strategy that addresses 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 Advancing Melbourne.

#### **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-of-personnel>

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**

<https://mdhs.unimelb.edu.au/our-organisation/institutes-centres-departments/cymh>

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 of The National Centre of Excellence in Youth Mental Health (Orygen) who were previously members of specific Departments (notably Psychiatry and Psychology), 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. Reporting arrangements are through the University of Melbourne structure with a direct report to Professor Jane Gunn, Dean of the Faculty.

##### **5.2 ORYGEN**

<https://www.orygen.org.au/>

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](http://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>