Department of Obstetrics and Gynaecology
Melbourne Medical School
Faculty of Medicine, Dentistry and Health Sciences

Data Scientist – Perinatal Epidemiology Group, Dept of Obstetrics and Gynaecology

POSITION NO  0026523
CLASSIFICATION  Level A – Research Fellow
SALARY  $80,258 - $108,906 p.a. (pro rata for part-time)
SUPERANNUATION  Employer contribution of 17%
WORKING HOURS  Full-time (1 FTE)
BASIS OF EMPLOYMENT  Fixed term for 12 months
OTHER BENEFITS  https://about.unimelb.edu.au/careers/staff-benefits
HOW TO APPLY  Online applications are preferred. Go to http://about.unimelb.edu.au/careers, select the relevant option ('Current Opportunities' or 'Jobs available to current staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY  Jessica Atkinson
  jess.atkinson1@unimelb.edu.au
  Please do not send your application to this contact

For information about working for the University of Melbourne, visit our website:
about.unimelb.edu.au/careers
Acknowledgement of Country

The University of Melbourne acknowledges the Traditional Owners of the unceded land on which we work, learn and live: the Wurundjeri Woi Wurrung and Bunurong peoples (Burnley, Fishermans Bend, Parkville, Southbank and Werribee campuses), the Yorta Yorta Nation (Dookie and Shepparton campuses), and the Dja Dja Wurrung people (Creswick campus).

The University also acknowledges and is grateful to the Traditional Owners, Elders and Knowledge Holders of all Indigenous nations and clans who have been instrumental in our reconciliation journey.

We recognise the unique place held by Aboriginal and Torres Strait Islander peoples as the original owners and custodians of the lands and waterways across the Australian continent, with histories of continuous connection dating back more than 60,000 years. We also acknowledge their enduring cultural practices of caring for Country.

We pay respect to Elders past, present and future, and acknowledge the importance of Indigenous knowledge in the Academy. As a community of researchers, teachers, professional staff and students we are privileged to work and learn every day with Indigenous colleagues and partners.

Position Summary

The Department of Obstetrics and Gynaecology is an internationally recognised centre of excellence for academic Obstetrics, Gynaecology, and Neonatal Paediatrics. Its mission is to provide a high-quality academic service across a broad range of clinical, educational and research activities within its associated teaching hospitals. The Mercy Perinatal research unit is based within The University of Melbourne Department of Obstetrics and Gynaecology at Mercy Hospital for Women, Heidelberg.

The Mercy Perinatal unit comprises a dynamic team of scientists and clinician researchers working toward developing new diagnostics and therapeutics and improving the understanding of major pregnancy complications. The team’s current suite of projects range from investigating the associations between medications taken during pregnancy and maternal and childhood outcomes, through to the development of novel devices to detect and prevent pregnancy complications and the development of therapeutics and diagnostic markers.

Within Mercy Perinatal, the Perinatal Epidemiology Group are seeking a highly skilled and motivated Data Scientist. The ideal candidate will have extensive experience in the management and cleaning of large, health-based linked datasets, and be an experienced user of STATA software. Previous use of R and/or Python software is preferable. The Data Scientist role is intended to support the Perinatal Epidemiology team over a 12-month period. The successful applicant must be enthusiastic about translational medicine and improving outcomes for mothers and babies. The role includes primary responsibility for the management, cleaning, and administration of a complex population-wide dataset of over 1 million births, linked to multiple childhood and maternal outcome databases.

The Data Scientist will be required to work within R or Python and STATA software platforms, to help oversee and clarify data completeness, implausible values, validity of record linkages, and data quality. The Data Scientist will be required to provide complete and cleaned data files for discrete projects for analysis by principal investigators. This function is critical to the success of the Perinatal Epidemiology group and its planned research outputs.

The position will report to the Senior Research Fellows (Perinatal Epidemiology), liaise closely with other team members, and will be based in the Department of Obstetrics and Gynaecology,
Mercy Hospital for Women, University of Melbourne. The successful candidate will work collaboratively with other Departmental staff and teams.

We foster a values-based culture of innovation and creativity to enhance the research performance of the University, and to achieve excellence in teaching and research outcomes. We invest in developing the careers and wellbeing of our students and staff, and expect all out leaders to live our values of:

- Collaboration and teamwork
- Compassion
- Respect
- Integrity
- Accountability

1. **Key Responsibilities**

1.1. **Dataset Management and Research Support**

- Overseeing day-to-day coordination of research datasets used by the Perinatal Epidemiology Group – primarily a large, Commonwealth-level linked dataset.
- Timely, accurate, well-organised, and clearly documented data cleaning, coding, testing of linkage validity, and data dictionary preparation.
- Writing and executing STATA .do files, in addition to the management of data in Microsoft Excel.
- Liaising with team members regarding implausible outcome data contained within the dataset.
- Designing and running reports to highlight and describe aberrant and missing data; disseminating results to team members.
- Data analysis as required.
- Provide complete and accurate do files of all works.
- Contribution to statistical analysis plans.
- Conducting ethical research with integrity and in line with the principles laid out in ICH-GCP, the NHMRC *National Statement* and relevant University of Melbourne policies (including the University *Code of Conduct for Research*).
- Working to improve skill base in research productivity and methodology.
- Assisting in the production of high calibre, competitive research outputs.
- Adhere to and maintain research protocols and storage of research data in keeping with the Departmental, University, and other institutional requirements, with regards to privacy and confidentiality.

1.2 **Research and Research Training**

- Data cleaning, management, and preparation of key datasets for analysis by principal investigators.
- Participate in research independently and as a member of a research team,
- Contribute to publications arising from research.
Preparation of monthly summary statistics.

1.3 SERVICE AND LEADERSHIP

- Research administration support.
- Collaborate with members of the research team and key stakeholders as required.
- Support study investigators with preparation of data for scientific research.
- Undertake other duties commensurate with the position as requested.

2. Selection Criteria

2.1 ESSENTIAL

- Advanced qualification (Masters, PhD, or equivalent) in science, health, biomedicine, biostatistics, econometrics, bioinformatics, or a related discipline.
- Appropriate level of expertise in management of large, complex datasets.
- Demonstrated computer skills, including spreadsheets, database programs, statistical software, and word processing.
- Demonstrated ability to apply research methodologies and conduct quantitative data analysis.
- Demonstrated skills in written communication and visual display of quantitative data.
- Demonstrated capacity to work both autonomously and in a team environment.
- Excellent time management, organisational, and analytical problem-solving skills.

2.2 DESIRABLE

- A PhD in a relevant field will be considered highly desirable (but not essential).
- Demonstrated understanding of research methodologies and governance.
- Demonstrated ability to participate in research independently and as a member of a research team.
- Prior experience working in a field relating to perinatal, maternal, or child health.
- Prior experience working within a secure virtual network (Sax Institute’s SURE platform, or similar) and in the use of advanced statistical software such as R.
- Demonstrate potential to supervise or co-supervise and mentor undergraduate, honours, and graduate diploma stage postgraduate students where possible.

2.3 OTHER JOB RELATED INFORMATION

- This position requires the incumbent to hold a current and valid Working With Children Check.
- Suitable for working from home (partial) and flexible working hours.
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 DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY


The University Department of Obstetrics, Gynaecology and Newborn Health* is responsible for teaching Obstetrics, Gynaecology and Neonatal Paediatrics, to MD medical students. Currently, each year approximately 350 medical students spend 8 weeks (across 4 rotations) attached to the Department during the third year of their medical course. In addition, there are graduate research students pursuing full-time or part-time research through the Department. These include Honours, Master of Biomedical Sciences and Doctor of Philosophy students. In Quarter 2 of 2023, there were approximately 37 graduate research students enrolled in the Department undertaking their PhD, including 2 under examination.

The Vision of the Department is to be an internationally recognised centre of excellence for academic Obstetrics, Gynaecology and Neonatal Paediatrics, and its Mission is to
provide high quality academic services across a broad range of clinical, educational and research activities within its associated teaching hospitals, and especially at its major centres, the Royal Women's Hospital and the Mercy Hospital for Women.

Other associated teaching hospitals are the Joan Kirner Women's and Children's at St. Albans (part of Western Health), the Northern Hospital in Epping (part of Northern Health), the St Vincent’s and the Epworth Clinical Schools (and private hospitals) and the Ballarat Hospital and Goulburn Valley Hospital (Shepparton), both of which are linked to the Department of Rural Health.

The Department is committed to establishing and maintaining a workplace culture consistent with the Faculty of Medicine, Dentistry and Health Sciences’ values of Respect, Accountability, Compassion, Collaboration and Teamwork, and Integrity.

The Department of Obstetrics, Gynaecology and Newborn Health has a strong research base with a history of significant competitive grant funding success from external, peer reviewed, grant awarding bodies. Particular areas of current research strength include maternal fetal medicine, neonatal paediatrics, women’s health, infectious diseases, gynaecological oncology and reproductive biology. In 2022, the Department received Commonwealth grant funding of $5.0m and State Government and Other grant funding of $4.7m. The Department is also very successful in attracting philanthropic income to support its research endeavours and is very thankful for the generosity of its donors.

Staff of the Department include clinical academics, research fellows, research assistants and other research support personnel, administrative personnel and a teaching staff associated with the various teaching hospitals involved in the delivery of the Department's graduate teaching programme. As of December 2022, the Department has 89 fixed term and continuing staff (headcount). The Department is also grateful for its 135 honorary staff who contribute to and help to successfully deliver the teaching and research activities of the Department.

The origins of the University of Melbourne Department of Obstetrics and Gynaecology can be traced back to 1924, when the Victorian Branch of the British Medical Association appointed a committee under the leadership of Dr J W Dunbar Hooper "to enquire into the condition of midwifery work" in Victoria.

5.2 MELBOURNE MEDICAL SCHOOL

Established in 1862, Melbourne Medical School (MMS) in the Faculty of Medicine, Dentistry and Health Sciences at The University of Melbourne is the oldest medical school in Australia. It is internationally renowned for global leadership in teaching and training, health research, policy and practice. MMS is ranked 14th in the world (Times Higher Education World University Rankings 2022 for clinical, pre-clinical and health), has strong academic partnerships and ground-breaking collaborative research programs with leading public and private hospitals, as well as leading medical research institutes and centres in Australia and internationally.

Under the leadership of Professor John Prins, MMS spans all major fields of medicine and is comprised of thirteen clinical departments:

- Baker Department of Cardiometabolic Health;
- Clinical Pathology;
- Critical Care;
- General Practice;
- Medical Education;
• Infectious Diseases;
• Medicine;
• Obstetrics and Gynaecology;
• Paediatrics;
• Psychiatry;
• Radiology;
• Rural Health; and
• Surgery.

MMS has more than 1,000 academic and professional staff members located at the Parkville campus or embedded within health services throughout metropolitan Melbourne and rural Victoria. Staff are privileged to work alongside more than 2,725 honorary appointees from the health sector who generously contribute their time, knowledge, research and clinical expertise.

MMS is committed to improving community wellbeing through the discovery and application of new knowledge. With annual research income of $165 million, the School’s research effort is highly collaborative, spanning research programs from basic to translational. The School has research collaborations across the 47 partner organisations in the vibrant Melbourne Biomedical Precinct, as well as nationally and internationally. These partnerships enable medical advances to impact healthcare delivery as rapidly and seamlessly as possible.

The School’s flagship Doctor of Medicine (MD) degree was the first Masters level entry-to-practice qualification of its kind developed in Australia, setting a new benchmark in medical education. Now, the new curriculum launched in 2022 has created more responsive, modular, technology-enhanced learning for state-of-the-art curriculum delivery. Continuous research and discovery options, and an ability to tailor the degree, allows each student to gain deeper experience in areas of greatest interest. The MD Rural Pathway offers students the opportunity to undertake their entire program in rural Victoria, with a $6.5 million expansion of facilities in Shepparton to accommodate this. There is also an expanded range of joint degree pathways on offer. The School utilises the Department of General Practice’s continually expanding network of general practitioners and primary healthcare providers in the community to ensure that MD students are also provided with quality community-based medical education.

In addition to the MD, MMS has an ever-expanding portfolio of other vocationally oriented programs. These teach research skills, leadership and continuing professional development in specific disciplines. An emphasis on the clinician-scientist career trajectory – with training, support and ongoing career pathways at graduate and postgraduate levels – is central to the School’s development of future leaders in all aspects of healthcare, education, research and policy. MMS has over 600 higher degree by research candidates located both within Departments and across its network of partners.

School staff and honorary appointees lead and participate in public debate and advocacy around key health issues and policy based on the MMS values of commitment, integrity, compassion, respect and service. The School also offers a range of initiatives and programs in support of its diverse and inclusive culture: https://medicine.unimelb.edu.au/about/diversity-and-inclusion MMS is always looking to recruit talented individuals across a wide range of medical disciplines which include leadership roles. This presents a wonderful opportunity for appointees to help drive the strategy, growth and continued excellence of Australia’s leading medical school.
5.3 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

5.4 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.

5.5 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