



POSITION DESCRIPTION

School of Computing and Information Systems
Faculty of Engineering and Information Technology

Postdoctoral Research Fellow in Generative AI

POSITION NO	0062839
CLASSIFICATION	Level A
SALARY	\$80,258.00 - \$108,906.00 (pro rata for part-time)
SUPERANNUATION	Employer contribution of 17%
WORKING HOURS	Full-time
BASIS OF EMPLOYMENT	Fixed-term "for 3 years" Applications for part-time or other flexible working arrangements will be welcomed and will be fully considered subject to meeting the inherent requirements of the position
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	Professor Chris Leckie Email caleckie@unimelb.edu.au <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

Acknowledgement of Country

The University of Melbourne acknowledges the Traditional Owners of country throughout Australia. The University recognises the unique place held by Aboriginal and Torres Strait Islander peoples as the original custodians of country and their continued connection to the land, waterways, songlines and culture. The University respects all Aboriginal and Torres Strait Islander People and warmly embrace those students, staff, Elders and collaborators who identify as First Nations.

Commitment to Diversity and Inclusion

The Faculty of Engineering and Information Technology (FEIT) is committed to creating a diverse and inclusive environment that welcomes and values all people. We recognise that diversity is essential in contributing to the success of FEIT. Women, Aboriginal and Torres Strait Islanders, the LGBTIQ+ community, people living with disability and those from a culturally and linguistically diverse background, are strongly encouraged to apply.

Position Summary

The Research Fellow in Generative AI will contribute to the **Australian Research Council Centre of Excellence for Automated Decision-Making and Society (ADM+S)** project on **Generative Authenticity**, which is a three-year research project. This project will investigate the risks of generative AI being used in new types of attacks to disrupt critical services, devise novel defences against such attacks, and assess the impact of such defences on legitimate users. The position will be part of a team comprising investigators from the University of Melbourne, RMIT University, QUT and University of Queensland. The successful applicant will have a background in computer science (or related discipline) with a strong research track record in developing novel algorithmic methods for machine learning, especially for generative AI. Experience in research into adversarial machine learning would also be an advantage.

The Research Fellow will be based at the School of Computing and Information Systems in the Faculty of Engineering and Information Technology at the University of Melbourne, and affiliated with the ARC Centre of Excellence for Automated Decision-Making and Society. You will collaborate actively with the Centre of Excellence's national and international network of participants. You will conduct independent and collaborative research, leading to the preparation and publication of research outcomes in conferences and journals. All Centre postdoctoral research fellows will also have access to the Centre of Excellence's research training and professional development opportunities, international visiting fellowships and exchanges (travel arrangements permitting), and the Centre's network of industry partners. You will be expected to be an active member of the School of Computing and Information Systems and the Centre of Excellence, collaborating with other researchers. You may have the opportunity to undertake small amounts of teaching, conduct training activities and research supervision directly related to your area of research.

About the Centre of Excellence

The rapid expansion of automated decision-making enabled by technologies such as machine learning has great potential benefits, while it also creates serious new risks to human rights and welfare. Potential harms range from data discrimination against disadvantaged communities to the spread of disinformation for political and commercial ends. Increasing inequality, lower productivity and diminished economic security have been highlighted as risks in the coming decade.

The ARC Centre of Excellence for Automated Decision-Making and Society (ADM+S) is a cross-disciplinary, national research centre, which aims to create the knowledge and strategies necessary for responsible, ethical, and inclusive automated decision-making. Funded by the Australian Research Council from 2020 to 2027, ADM+S is hosted at RMIT in Melbourne, Australia, with nodes in seven other Australian universities including the University of Melbourne. The Centre brings together leading researchers in the humanities, social and technological sciences in an international industry, research and civil society network. Its priority domains for public engagement are news and media, transport, social services and health.

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.

1.1 RESEARCH AND RESEARCH TRAINING

- ▶ Independently plan and carry out research on the nominated research project and work towards completion of the aims of the project;
- ▶ Develop effective timelines and milestones based on goals of the research programme;
- ▶ Regularly write technical reports on the outputs of the experiments conducted, and maintain accurate and detailed records of all experiments conducted;
- ▶ Participate in preparation of manuscripts for publication in peer-reviewed conferences and journals;
- ▶ Liaise effectively with collaborators among a variety of internal and external stakeholders;
- ▶ Assist other researchers in carrying out experiments in order to work as a team and further the School's and Centre's research excellence in machine learning;
- ▶ Contribute actively to the Centre's and School's research culture, including participation in research collaboration and community building within the Centre's research programmes and focus areas;
- ▶ Conform to University and ARC Centre requirements with respect to research ethics and integrity, and data management;
- ▶ Perform other research duties as requested by the appointee's immediate supervisor.

1.2 TEACHING AND LEARNING

- ▶ Contribute to teaching, training, scientific mentoring and supervision of students, including co-supervision of research projects for students at Masters or PhD level;
- ▶ Supervise junior research staff in the appointee's area of expertise;
- ▶ Possibility to conduct lectures, tutorials, mark and undertake laboratory duties where mutually agreed with the School.

1.3 LEADERSHIP AND SERVICE

- ▶ Support the Chief Investigators in coordinating the activities of the projects as required;
- ▶ Active participation in the communication and dissemination of research;
- ▶ Identify sources of funding to support individual or collaborative projects, relating to research and engagement practice in the discipline;
- ▶ Effective supervision of research support staff.

1.4 ENGAGEMENT

- ▶ Attend and contribute actively to group meetings;
- ▶ Active participation in some outreach activities relating to research and scholarship;
- ▶ Effective liaison with external networks to foster collaborative partnerships;
- ▶ Involvement in professional activities, including consultations and referrals;
- ▶ Present results at local, national and international forums;
- ▶ Attend and actively participate in School and Centre seminars, meetings and/or committee memberships.

2. Selection Criteria

2.1 ESSENTIAL

- ▶ A PhD in computer science or closely related discipline;
- ▶ A record of high-quality algorithmic research in machine learning, as evidenced by publications in leading journals and conferences in the fields of artificial intelligence and machine learning, commensurate with opportunity;
- ▶ Ability to perform independent research in machine learning, and a commitment to interdisciplinary research;
- ▶ Demonstrated capacity to communicate research concepts to technical and non-technical audiences;
- ▶ Excellent ability in analysing data, problem solving and experimental evaluation of machine learning algorithms;
- ▶ Capability for innovative research, as evidenced by scholarly publications;
- ▶ Experience in using initiative, working with minimal supervision and ability to prioritise tasks to achieve project objectives within timelines;
- ▶ Excellent written and verbal communication skills, demonstrated by presentation of research results at conferences, internal forums and through manuscript submissions;
- ▶ Excellent interpersonal skills, including an ability to interact with internal and external stakeholders (academic, administrative and support staff) in a courteous and effective manner.

2.2 DESIRABLE

- ▶ Demonstrated expertise and research track record on developing novel algorithms for adversarial machine learning;
- ▶ Experience in training, testing and analysing the complexity and performance of different types of machine learning algorithms on diverse and voluminous data sets;

- ▶ Experience in building demonstrations of the use of machine learning in practical application scenarios;
- ▶ Experience in supervision of graduate students and/or research assistants;
- ▶ Experience in working with external partners in government or industry to define new research or training projects;
- ▶ Experience in delivering training activities to research students or external partners;
- ▶ Ability to structure, engage and present information clearly to various audiences.

2.3 SPECIAL REQUIREMENTS OF THE ROLE

- ▶ This position requires the incumbent to hold a current and valid Working with Children Check.
- ▶ Occasional work out of ordinary hours, travel, etc.
- ▶ Perform other tasks as requested by the supervisor or the Head of School;

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.

Equity, diversity, and inclusion are also integral to the ADM+S Centre's mission: to create knowledge and strategies for responsible, ethical, and inclusive automated decision-making (ADM). The Centre recognises that racism, sexism, homophobia, transphobia, and ableism are principal obstacles to equity, diversity and inclusion, and remain primary causes of injustice and inequality. We believe that responsible, ethical, and inclusive ADM can deliver broad social benefits, including reducing inequalities for disadvantaged and vulnerable groups. Women, Aboriginal and Torres Strait Islanders, the LGBTIQ+ community, people living with disability and those from a culturally and linguistically diverse background, are strongly encouraged to apply.

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 THE SCHOOL OF COMPUTING & INFORMATION SYSTEMS

The School of Computing & Information Systems (CIS) undertakes research and teaching across a range of information technology disciplines including Software Engineering, Information Systems, and Computer Science. CIS is the most highly ranked School of Computing and Information Systems in Australia according to all major rankings (THE, QS, ARWU). It offers a comprehensive range of IT and IS courses at all levels, including offerings in science, engineering, and business, and is at the forefront of computing research in Australia and internationally with close links to major computing research initiatives, including Melbourne Bioinformatics, CSL, The Cremorne Digital Hub and CSIRO's DATA61.

The School's aim is to attract and retain outstanding staff available in order to maintain its lead in research and teaching. We have an existing highly successful research team in the area of the appointment, a large number of PhD students, and a substantial cohort of graduate students in our coursework Masters programs.

To find out more about CIS, visit: <http://www.cis.unimelb.edu.au/>

5.2 FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY

The Faculty of Engineering and Information Technology (FEIT) has been the leading Australian provider of engineering and IT education and research for over 150 years. We are a multidisciplinary School organised into three key areas; Computing and Information Systems (CIS), Chemical and Biomedical Engineering (CBE) and Electrical, Mechanical and Infrastructure Engineering (EMI). FEIT continues to attract top staff and students with a global reputation and has a commitment to knowledge for the betterment of society.

FEIT has never been better positioned as a global leader, anchored in the dynamic Asia Pacific region, creating and curating knowledge to address some of the world's biggest challenges. Through our students and our relationships with communities, we can not only respond to society's needs but anticipate and create engineering and IT solutions for the future.

<https://eng.unimelb.edu.au/>

<https://eng.unimelb.edu.au/about/join-feit>

Our ten-year strategy, FEIT 2025, is our School's commitment to bring to life the University-wide strategy Advancing Melbourne and reinforce the University of Melbourne's position as one of the best in the world.

To achieve our ambitions, we will continue to build new infrastructure to enable our teaching, research and engagement; we continue to recruit outstanding people from around the world; and we continue to attract high-quality students from across the globe who are at the heart of our enterprise.

<https://eng.unimelb.edu.au/about/feit-2025>

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>