



POSITION DESCRIPTION

School of Computing and Information Systems
Melbourne School of Engineering

Research Fellow in AI

POSITION NO	0046388
CLASSIFICATION	Research Fellow (Academic Level B)
SALARY	\$98,775 - \$117,290 (pro-rata for part-time)
SUPERANNUATION	Employer contribution of 9.5%
WORKING HOURS	Full-time or Part-time (minimum 0.6 FTE) <i>Please note this is negotiable</i>
BASIS OF EMPLOYMENT	Fixed-term for 18 to 24 months
OTHER BENEFITS	http://www.eng.unimelb.edu.au/about/join-mse/why-join-mse
CONTACT FOR ENQUIRIES ONLY	Dr Wally Smith Tel +61 3 8344 1494 Email wsmith@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

The University of Melbourne

Established in 1853, the University of Melbourne is a public-spirited institution that makes distinctive contributions to society in research, learning and teaching and engagement. It's consistently ranked among the leading universities in the world, with international rankings of world universities placing it as number 1 in Australia and number 32 in the world (Times Higher Education World University Rankings 2017-2018).

<https://about.unimelb.edu.au/strategy/growing-esteem>

Melbourne School of Engineering

Melbourne School of Engineering (MSE) 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). MSE continues to attract top staff and students with a global reputation and has a commitment to knowledge for the betterment of society.

Our ten-year strategy, MSE 2025, is our School's commitment to bring to life the University-wide strategy *Growing Esteem* and reinforce the University of Melbourne's position as one of the best in the world. Investment in new infrastructure, strengthening industry engagement and growing the size and diversity of our staff and student base to drive innovation and develop the transformative technologies of the future are all fundamental principles underpinning MSE 2025.

<http://www.eng.unimelb.edu.au/about/join-mse/why-join-mse>

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. It offers a comprehensive range of IT 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, IBM Research, the Microsoft Research Centre for Social Natural User Interfaces (SNUI), and DATA61 (formerly NICTA).

The School's aim is to attract and retain outstanding staff available in order to maintain a leading 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.

<http://www.cis.unimelb.edu.au/>

Position Summary

Play an important role in a leading-edge project funded by the Australian Research Council to study deception carried out by AI systems and intelligent software agents. Further details of the project are at: <https://cis.unimelb.edu.au/research/groups/interaction-design/projects/deceptive-ai/>.

The position will be based within the School of Computing and Information Systems within the Melbourne School of Engineering, at the University of Melbourne. You will conduct independent research working with a team of researchers in both agent systems and human-computer interaction. The position-holder will take a leading role in the following: shaping the theoretical direction of the work and its impact of theories of AI; leading and carrying out agent software development to time deadlines; conducting evaluation studies with live trials involving people interacting with the software; carrying out analysis of human performance data; and making a strong contribution to article writing. In addition, the position-holder will take an active part in the life of the School of Computing and Information Systems, and this may involve opportunities for research supervision and teaching.

The Melbourne School of Engineering is strongly committed to supporting diversity and flexibility in the workplace. 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.

The University plan seeks to increase the diversity of the workforce and the representation of women in areas they have been traditionally under-represented. Consistent with this, the School is seeking to increase the representation of women in the academic workforce across engineering disciplines. Under a Special Measure, under Section 12 (1) of the Equal Opportunity Act 2010 (Vic) the School is seeking to lift the representation of women from 20% in 2014 to at least 25% over the next 5 years, and strongly encourages applications from suitably qualified female candidates.

1. Selection Criteria

1.1 ESSENTIAL

- ▶ A PhD in Computer Science, or related discipline.
- ▶ Demonstrated excellent software development skills and experience.
- ▶ Familiarity with software agent architectures.
- ▶ A track record of quality research in the discipline as evidenced by research publications in leading conferences and journals commensurate with opportunity.
- ▶ Demonstrated ability to reason about complex theoretical concepts and to extend and refine those concepts based on empirical evidence.
- ▶ Demonstrated experience in using initiative, working with minimal supervision and ability to prioritise tasks to achieve project objectives within timelines.
- ▶ Excellent ability to work co-operatively in a multi-disciplinary team environment and liaise with associates from both industry and academia.
- ▶ Excellent ability in analysing data, problem solving, excellent research records keeping skills and developing new experimental protocols.
- ▶ Ability to undertake experiments with human participants.

- ▶ Excellent communication and interpersonal skills, including an ability to interact with internal and external stakeholders (including: academic, industry and support staff).
- ▶ Excellent written and verbal communication skills, demonstrated by presentation of research results at conferences, internal forums and through manuscript submissions.

1.2 DESIRABLE

- ▶ Experience in supervision of students and/or research assistants.
- ▶ Experience in the successful completion of ethics applications and submission of grant applications.
- ▶ Experience in a leadership role within a research team.

2. Key Responsibilities

2.1 RESEARCH – ADVANCEMENT OF THE DISCIPLINE

- ▶ Independently plan and carry out research on the project ('A Computational Theory of Strategic Deception') and work towards the achievement of its aims.
- ▶ Design and develop the software for an interactive game to be played between people and intelligent software agents.
- ▶ Collaborate with the existing research team in the development of a theory of strategic deception.
- ▶ Conduct experiments with human participants who play the interactive game.
- ▶ Regularly write technical reports on the outputs of the experiments conducted, and maintain accurate and detailed records of all experiments conducted.
- ▶ Make significant contributions to writing key publications based on the project work.
- ▶ Assist other researchers in carrying out experiments in order to work as a team and further the department's research output.
- ▶ Perform administrative functions primarily connected with the research project, including generating written summaries of discussions, developing detailed research plans with the project investigators and writing these into a project plan, and contributing to ethics submissions and reports to funding bodies.

2.2 TEACHING AND LEARNING

- ▶ Contribute to teaching, training, scientific mentoring and supervision of students.

2.3 ENGAGEMENT

- ▶ Present experimental results at local, national and/or international forums.
- ▶ Attend and actively participate in departmental seminars, meetings and/or committee memberships.

2.4 SERVICE AND LEADERSHIP

- ▶ Undertake administrative duties and general laboratory duties including maintenance of the laboratory and equipment and ordering of supplies.
- ▶ Contribute to the preparation and submission of competitive grant applications relating to the appointee's research program.

2.5 OTHER

- ▶ Perform other tasks as requested by the supervisor or the Head of the School;
- ▶ Undertake Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in Section 4.

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:

<http://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.