THE UNIVERSITY OF
MELBOURNE

School of Computing and Information Systems
Melbourne School of Engineering

Research Fellow in AI and Big Data Analytics

POSITION NO	0045185
CLASSIFICATION	Research Fellow (Level A)
SALARY	$69,148 - $93,830 p.a.
SUPERANNUATION	Employer contribution of 9.5%
WORKING HOURS	Full-time (1.0 FTE)
BASIS OF EMPLOYMENT	Fixed-term for 1.5 years
OTHER BENEFITS	http://www.eng.unimelb.edu.au/about/join-mse/why-join-mse
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 Rui Zhang Tel +61 3 83441345 Email rui.zhang@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

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

We seek a highly motivated researcher in the area of data mining and machine learning. On offer is a 1.5-year position for a Research Fellow to work on an Australian-Research-Council-funded project "Continuous Intent Tracking for Virtual Assistance Using Big Contextual Data". The Research Fellow will work in collaboration with the Chief Investigator Professor Rui Zhang.

This project will develop algorithms for virtual assistants and task oriented chatbots, falling in the broader field of AI and big data analytics.

You will conduct independent research under the supervision of Professor Rui Zhang, leading to the preparation and publication of research outcomes in conferences and journals in top venues such as SIGKDD, WWW, IJCAI, NIPS, ICML, ACL, SIGMOD, AAAI, VLDB, ICDE, WSDM, ICDM, etc.

You will be located in the School of Computing and Information Systems within the Melbourne School of Engineering and will be expected to be an active member of the Department. You may undertake small amounts of teaching and research supervision directly related to your area of research, as required.

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 closely related discipline.
- A record of quality research as evidenced by a good number of publications in leading venues such as SIGKDD, WWW, IJCAI, NIPS, ICML, ACL, SIGMOD, AAAI, VLDB, ICDE, WSDM, ICDM, etc.
- Excellent teamwork and collaboration skills.
- Ability to perform independent research 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 maintaining accurate research records.
- Capability for innovative research, as evidenced by scholarly publication.
- 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.

1.2 DESIRABLE

- Experience in data mining and machine learning.

- Experience in supervision of students and/or research assistants.

- Experience in the completion of ethics applications and submission of grant applications.

2. Key Responsibilities

2.1 RESEARCH – ADVANCEMENT OF DISCIPLINE

- 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.

- Perform data and microstructure analysis, and be responsible for qualitative and statistical analysis of research data and to communicate this information to the Chief Investigators and collaborators.

- 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 journals.

- Liaise effectively with collaborators with a variety of internal and external stakeholders.

- Assist other researchers in carrying out experiments in order to work as a team and further the department's research output.

- Contribute to the development of the Department's and the School's strong research program in data mining and machine learning.

- Work towards building an independent research project.

2.2 TEACHING AND LEARNING

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

- Supervise junior research staff in the appointee's area of expertise.

- Conduct lectures, tutorials, mark and undertake laboratory duties as required by the Department (if required).

2.3 ENGAGEMENT

- 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 forums.
- Attend and actively participate in departmental seminars, meetings and/or committee memberships.

2.4 SERVICE AND LEADERSHIP

- Active participation in the communication and dissemination of research.
- Identify sources of funding to support individual or collaborative projects, relating to teaching, research and engagement practice in the discipline.
- Effective supervision of research support staff.

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.