POSITION DESCRIPTION



School of Computing and Information Systems

Melbourne School of Engineering

Research Fellow in Adversarial Learning for NLP

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| Position No | XXXXXX |
| Classification | Research Fellow (Level A) |
| Salary | $72,083\*- $97.812 p.a. (\*PhD entry Level A.6 $91,125) |
| Superannuation | Employer contribution of 9.5%  |
| Employment Type | Full-time (fixed-term) position available for 1 year |
| Other Benefits | <http://about.unimelb.edu.au/careers/working/benefits> |
| contactFor enquiries only | Professor Trevor CohnEmail: trevor.cohn@unimelb.edu.auPlease 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

Position Summary

The University of Melbourne is seeking a post-doctoral Research Fellow in machine learning and natural language processing for a 12-month position. The research will specifically address development and evaluation of adversarial methods for natural language processing methods, considering both the development of attacks, as well as defences to attacks in order to create more robust algorithms. The focus will be on language generation settings, including translation. The work will make use of several frameworks such as Generative Adversarial Networks (GANs), and differential privacy (DP).

The Research Fellow will be based in the natural language processing group in the School of Computing and Information Systems at the University of Melbourne and will work under the direction of  Professor Trevor Cohn and Associate Professor Benjamin Rubinstein. This position provides an opportunity for an emerging researcher to build their research career in the context of research with strong practical value.

# Selection Criteria

## Essential

* A PhD in Computer Science or related field, awarded or submitted for examination.
* An emerging research track record and recognition of high-quality research outputs, evidenced by publications and the development of research initiatives.
* Strong programming skills and the ability to implement practical systems.
* Experience in machine learning and/or computational linguistics.
* Experience in working with minimal supervision, and ability to prioritise tasks to achieve project objectives within timelines.
* Demonstrated capacity to communicate research concepts to technical and non-technical audiences.
* 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.

## DESIRABLE

One or more of the following:

* Specific experience with probabilistic graphical models.
* Specific experience with adversarial learning, and differential privacy.

# Key Responsibilities

* 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 project.
* The successful candidate will have exceptional communication skills and will publish their findings in top quality journals. They will also conduct presentations to a broad audience, including key industry partners.
* The Research fellow will contribute to organising a shared task related to project objectives.
* Occupational Health and Safety (OH&S) and Environment Health and Safety (EHS) responsibilities.

# 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 deserve to service for excellence and reach the targets of Growing Esteem.

# 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/topics/responsibilities/>

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

The University of Melbourne

Established in 1853, the University of Melbourne is a public-spirited institution that makes distinctive contributions to society in [research](https://research.unimelb.edu.au/), [learning and teaching](https://about.unimelb.edu.au/teaching-and-learning) and [engagement](https://engagement.unimelb.edu.au/). It is 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 2019-2020)

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>

School of Computing & Information Systems

The School of Computing & Information Systems 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, and CSIRO/DATA61 (formerly NICTA). It was ranked 13th in the 2018 QS World University Ranking exercise by discipline.

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/