



Research Fellow opportunity in detecting and modelling misinformation spread

University of Technology Sydney, Australia

- Position title:** Research Fellow (level ACA B.2)
- Salary range:** AU\$110K-\$132K + 17% superannuation
- Position duration:** 1 year (Sept 2022 – August 2023) + possible extension based on performance and funding availability
- Work type:** Full-time; mixed mode (in-person in Sydney, Australia and online)
- Organisation:** Behavioral Data Science group, UTS Data Science.
- Keywords:** Disinformation detection and modelling, social cohesion, social impact

Position description:

We are looking to recruit two postdoctoral Research Fellow to work on a recently awarded Commonwealth of Australia grant entitled “Disinformation Defence Initiative: Delivering tools and analysis to fight the growing threat of disinformation for Australia”. The postdocs will work closely with the chief investigators on the grant (Dr. Marian-Andrei Rizoio from University of Technology Sydney, Australia and Prof Hany Farid from UC Berkley, USA) on the following:

- **Mis- and Dis-information diffusion modelling:** help with developing the theoretical models for the spread of mis- and dis-information across platform boundaries; develop models for the interaction of opinions and content, and their response to intervention instruments; build predictive modelling for understanding which content will become popular and adopted.
- **Analysing social and traditional media originating data:** investigate known (past) episodes of mis/disinformation and details the users, methods, groups and platforms, as well as the opinions pushed to the audience; analyse success in terms of views, reshares, and generally adoption of content.
- **Work closely with engineers** who implement data acquisition and modelling tools into a dashboard prototype.
- **Disseminate and make policy recommendations:** this includes publishing scientific papers, and government reports recommending policy updates.

Research Project Summary

With social media as its primary carrier, propaganda and disinformation spread wider than ever before. We are observing a flurry of damaging activity – from vaccine opposition groups riding a once-in-a-century pandemic to far-right groups pushing extremist and racial targeting content. This project develops novel approaches for mis-/dis-information diffusion modelling, and for automated source validity quantification estimation. The goal is to understand what drives the adoption of misinformation, and it can be countered. The main deliverables of the project are academic knowledge and prototype tools.

Over the past several years, the Behavioral Data Science lab has been developing and deploying best-in-class theoretical modelling to understand and forecast the flow of mis- and dis-information through online social media. The current project leverages world-renowned



international expertise (UC Berkley) on automatically estimating the veracity and validity of information sources, to modulate the spread processes. Funded by the Commonwealth of Australia, the project will contribute to understanding what makes misinformation spread, and how to stem it.

Required skills and expertise

- PhD Diploma in Computer Science, Computational Social Science, Computational Linguistics, Applied Mathematics, Applied Statistics or related fields; inter-disciplinary research expertise is a plus;
- A world-class publication track record featuring high impact venues (including, but not limited to, The Web Conference, WSDM, NeurIPS, JMLR, AAAI, ICWSM or CSCW)
- Computer science background, strong data science knowledge (having hands-on experience is a plus), strong programming skills (Python and/or R), machine learning knowledge;
- Social science, digital communications, political science expertise are desirable.
- good mathematical and statistics background, ideally in time series analysis, point processes – actuarial or financial studies are a plus.

How to Apply

Formal applications will be made through the UTS hiring systems (link to be provided shortly). In the meanwhile, drop us an email at Marian-Andrei.Rizoiu@uts.edu.au. Tell us a couple of words about yourself and why you are the perfect candidate; don't forget to attach with CV.