




# Yueqing Xuan

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## EDUCATION

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### PhD in Computer Science, RMIT University

Aug 2022 – Now

- **Supervisors:** Prof Jeffrey Chan, Prof Mark Sanderson and Dr Kacper Sokol (USI Switzerland).
- **Scholarship:** Recipient of the *Australian Research Council (ARC) Centre of Excellence for Automated Decision-Making and Society (ADM+S)*.
- **Research Focus:** Explainable AI, Counterfactual Explanation, Recommender Systems.

### Master of Information Technology, University of Melbourne

Feb 2020 – Jul 2022

- **Specialisation:** Artificial Intelligence.
- **Supervisors:** Dr Lea Frermann and Dr Adi Tarigoppula.
- **WAM:** 84.50 – H1, First Class Honours.
- **Achievements:** Recognised on the *Dean's Honours List 2021* at the University of Melbourne for top 5% students. Awarded *Melbourne Graduate Scholarship 2022*.

### Bachelor of Commerce, University of New South Wales

Jul 2015 – Jul 2018

- **Major:** Accounting and Information Systems.
- **WAM:** 74.50.

## PUBLICATIONS

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### Conference and Journal Papers

- [1] **Yueqing Xuan**, Kacper Sokol, Mark Sanderson, Jeffrey Chan. “Evaluating and Addressing Fairness Across User Groups in Negative Sampling for Recommender Systems”. Proceedings of the 34th ACM International Conference on Information and Knowledge Management (CIKM), 2025, <https://doi.org/10.1145/3746252.3761263>.
- [2] **Yueqing Xuan**, Kacper Sokol, Mark Sanderson, Jeffrey Chan. “Diverse Negative Sampling for Implicit Collaborative Filtering”. Under review at the Web Conference 2026, <https://doi.org/10.48550/arXiv.2508.14468>.
- [3] **Yueqing Xuan**, Kacper Sokol, Mark Sanderson, Jeffrey Chan. “Perfect Counterfactuals in Imperfect Worlds: Modelling Noisy Implementation of Actions in Sequential Algorithmic Recourse”. Machine Learning, 114, no.8 (2025): 187, <https://link.springer.com/article/10.1007/s10994-025-06821-1>.
- [4] Kacper Sokol\*, Edward Small\*, **Yueqing Xuan\***. “Navigating explanatory multiverse through counterfactual path geometry”. Machine Learning, 114, no.6 (2025): 1-33, <https://link.springer.com/article/10.1007/s10994-025-06769-2>. \*Equal contribution.
- [5] **Yueqing Xuan**, Kacper Sokol, Mark Sanderson, Jeffrey Chan. “Leveraging Complementary AI Explanations to Mitigate Misunderstanding in XAI”. 2025 IEEE Swiss Conference on Data Science (SDS), 2025, pp. 174-177, <https://doi.org/10.1109/SDS66131.2025.00034>.
- [6] **Yueqing Xuan**, Edward Small, Kacper Sokol, Danula Hettiachchi, Mark Sanderson. “Comprehension Is a Double-Edged Sword: Over-Interpreting Unspecified Information in Intelligible Machine Learning Explanations”. International Journal of Human-Computer Studies (IJHCS), 2024, 103376, ISSN 1071-5819, <https://doi.org/10.1016/j.ijhcs.2024.103376>.

## Workshop Papers

- [1] Edward Small\*, **Yueqing Xuan\***, Danula Hettiachchi\*, Kacper Sokol\*. “Helpful, Misleading or Confusing: How Humans Perceive Fundamental Building Blocks of Artificial Intelligence Explanations”. ACM CHI Workshop on Human-Centered Explainable AI (HCXAI). In: arXiv preprint arXiv:2303.00934. 2023.
- [2] Kacper Sokol\*, Edward Small\*, **Yueqing Xuan\***. “Navigating Explanatory Multiverse Through Counterfactual Path Geometry”. ICML (International Conference on Machine Learning) Workshop on Counterfactuals in Minds and Machines. In: arXiv preprint arXiv:2306.02786. 2023.

## Thesis

- [1] **Yueqing Xuan**. “Multi-modal Entity Linker”. Master thesis. School of Engineering and Information Technology, University of Melbourne, 2021.

## PROFESSIONAL SERVICE

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### Conference Reviewing

- WSDM (2026), SIGIR (2025), SIGIR (2023).

## TEACHING

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**Tutor – COSC1285 Algorithm and Analysis** s1, s2 2025

- 1st year M.Sc. course, School of Computing Technologies, RMIT University.

**Tutor – COSC2123 Algorithm and Analysis** s1, s2 2024

- 2nd year B.Sc. course, School of Computing Technologies, RMIT University.

## WORK EXPERIENCE

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**Research Assistant, University of Melbourne, Melbourne** Nov 2019

- Research project: Humanoid robotic arm control through verbal commands (GitHub Link).
- Integrated the Porcupine wake word engine and IBM Watson speech recognition system into the robotic arm control framework for the anthropomorphic robotic limb. Interacted with the humanoid robot with real-time control through natural language commands.

**IT Support and Business Analysis Intern, The Altius Group, Sydney** Mar 2019 – May 2019

- Effectively managed, configured and troubleshoot a range of IT-related systems.
- Responsibly implemented and administrated database documentation, policies and procedures.
- Performed application and hardware configuration deployment and troubleshooting.

**GIS Data Processing Intern, Institute of Technical Physics, Shanghai** Nov 2016 – Feb 2017

- Worked in the Big Data team to analyse Geographic Information System (GIS) data by utilising the ContextCapture software.
- Designed and maintained database architecture, data structures, tables, dictionaries, and naming conventions to ensure the accuracy and completeness of data master files.