Kai Zhi Teh

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EDUCATION

PhD Statistical Science | University College London, UK **2022-2026**

- **Thesis: "Causal Inference Beyond Standard Assumptions and Models".**
- Researching validity conditions of general causal discovery algorithms, developing novel algorithms in Python that are valid beyond standard assumptions.
- Developing graphical models for causal analysis of equilibrium systems with confounding.
- Establishing causal effect identification criteria robust to structural ambiguity of causal graphs.

MEng Engineering Science (First Class Honours) | University of Oxford, UK **2017-2021**

- **Dissertation: "Graph Compression".** Proposed compression methods for real-world network data from Moogsoft using Exponential Random Graph models; validated model assumptions using Markov Chain Monte Carlo (MCMC) sampling.
- **Modules taken:** Machine Learning, Optimisation, Systems Control and Dynamical Systems.

RELEVANT EXPERIENCE

Research Assistant | Wolfram Research Europe, UK **2025-2026**

- Analysing data from the NHS and UK census to identify intervention targets for diabetes prevention.
- Establishing research collaborations between UCL and Wolfram in the form of joint grant bids.

Generative Models Project | European Study Group with Industry, UK **2025-2025**

- Collaborated with CameraForensics to detect unsafe content in the fine-tuning of image generation models without generating unsafe output.
- Evaluated image-classifier performance on noisy datasets using scikit-learn and PyTorch.

Teaching Assistant | University College London, UK **2022-2025**

- Led tutorials and coding demonstrations in R; developed assessment materials.
- Covered the modules – Introduction to Probability and Statistics, Stochastic Processes, Life Sciences Foundation.

Reinforcement Learning Summer Project | Oxford Artificial Intelligence Society, UK **2021-2021**

- Applied reinforcement learning using Python to evaluate Dell's business cases for adopting Technology as a Service.
- Liaised with Dell's business team to deliver business analytics.

Research Intern | Duke-NUS Institute of Precision Medicine, Singapore **2018-2019**

- Analysed large-scale biological datasets from local patients in Python using in-house computing clusters by collaborating with bioinformaticians.

PUBLICATIONS

Published

- **Teh, K.Z.**, Sadeghi, K. & Soo, T. (2025). Towards robust causal effect identification beyond Markov equivalence. *International Conference on Machine Learning (ICML) 2025: Scaling Up Intervention Models*.
- **Teh, K.Z.**, Sadeghi, K. & Soo, T. (2025). A general framework on conditions for constraint-based causal learning. *In: Scandinavian Journal of Statistics.*
- **Teh, K.Z.**, Sadeghi, K. & Soo, T. (2024). Localised natural causal learning algorithms for weak consistency conditions. *In: Proceedings of the 40th Conference on Uncertainty in Artificial Intelligence (UAI).*

Preprints/In Preparation

- **Teh, K.Z.**, Sadeghi, K. & Soo, T. (2026). Interpretable causal graphical models for equilibrium systems with confounding. *Preprint, arXiv:2603.24859.*
- **Teh, K.Z.**, Sadeghi, K. & Soo, T. (2026+). Data-driven causal effect identification across domains.

SELECTED PRESENTATIONS

Poster

- **Forty-Second International Conference on Machine Learning (ICML)**, Vancouver, July 2025.
- **2024 Conference on Uncertainty in Artificial Intelligence (UAI)**, Barcelona, July 2024.

Talk

- **Causal Inference in the Real World Workshop**, Cambridge, April 2026.
- **European Causal Inference Meeting 2025**, Ghent, April 2025.
- **2023 IMS International Conference on Statistics and Data Science**, Lisbon, December 2023.
- **RSS International Conference**, Harrogate, September 2023.

RELEVANT AWARDS

- UCL Poster Session 2026, Judge: Heather Battey, Joint First Prize.
- UCL Postgraduate Teaching Assistant Studentship, 2022-2025.
- Verdant Foundation - Cheng Kin Ku Scholarship, 2017-2021.

POSITIONS OF RESPONSIBILITY

UCL-ELLIS Computational Statistics and Machine Learning Seminar Series, Organiser **2022-2025**

- Led weekly seminars featuring leading researchers, secured funding from Jump Trading with co-organisers from the Departments of Computer Science and Neuroscience.

SKILLS

- **Programming**. Proficient in Python and packages such as NumPy and Pandas. Experienced in R.
- **Languages**. Fluent in Mandarin, English and Malay.