Dr Thin Nguyen

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▪ Research Summary

My research advances causal artificial intelligence: machine learning that goes beyond correlation to reason about causes, mechanisms, interventions and explanations. The central vision is to build systems that ask not only what is likely to happen, but why it happens, what would change under intervention, and when a learned model can be trusted under distribution shift. To this end I develop methods for causal discovery, causal inference, trustworthy and explainable AI, and causal reasoning in foundation models, with contributions including acyclicity-free and Bayesian causal discovery, conditional-independence testing with neural density models, robust causal direction and noise-model estimation, root-cause explanation, causal domain generalisation, and causal alignment and steering of large language models.

These methods are driven by scientific and public-interest challenges where causal reasoning provides actionable insight, robust decision support and scientific understanding: digital phenotyping and mental health, precision public health and chronic-disease prevention, drug discovery and repurposing, genomics and disease modelling, climate and environmental sustainability, social-science analytics, and scientific machine learning more broadly.

▪ Education and Qualifications

- Doctor of Philosophy (Computer Science), 10/2008–02/2012, Curtin University, Perth, WA, Australia.

▪ Employment

03/2012–Present
Associate Research Fellow → Research Fellow → Senior Research Fellow
Applied Artificial Intelligence Initiative (A2I2), Deakin University, Australia.

▪ Awards and Recognition

- 2025: Deakin Vice-Chancellor's Award for Outstanding Contribution to Research and Innovation.
- 2024: Team CDOZ, four top-ten awards in the US$100K Causal Discovery Challenge, CrunchDAO and ADIA Lab.
- 2022: Second place, EV Detection Challenge, United Energy.
- 2020: Achieved Kaggle Competition Master status (global ranking: 253rd).
- 2020: Ranked 5th of 4,373 teams in the Kaggle Mechanisms of Action Prediction Competition (Gold Medal).
- 2018: Best Performer Award, DREAM Single Cell Transcriptomics Challenge, IBM Research and Sage Bionetworks.
- 2017: Runner-up Application Paper Award, IEEE DSAA.
- 2016: Runner-up Best Student Paper Award, IEEE RIVF.
- 2008: Three-year PhD Scholarship, Curtin University.
- 2008: Monbukagakusho (MEXT) Scholarship (Japanese Government).
- 2008: IITA Scholarship (Korean Government).

▪ Grants

Total awarded research funding: approximately $13.16 million.

- 2024–2029: Project PHONOTYPE: Validation of smartphone-based digital phenotyping markers for detecting amotivation symptoms in young people with depression. $10.06 million. CIs: Alexis Whitton, Sunil Gupta, Jill Newby, Aliza Werner-Seidler, Helen Christensen, Svetha Venkatesh, Bridianne O'Dea, Artur Shvetcov, Emma Elder, Leonard Hoon, Rajesh Vasa, Kon Mouzakis, **Thin Nguyen**. Funding source: Wellcome Trust.
- 2021–2024: PRECIS: PRecision Evidence for Childhood obesity prevention InterventionS. $1.28 million. CIs: Melanie Nichols, Kathryn Backholer, Boyd Swinburn, Victoria Brown, **Thin Nguyen**, Christina Economos. Funding source: NHMRC (Ideas Grants GA143439).
- 2020–2021: Identification of Blood RNA Biomarkers to Measure Disease Progression in Parkinson's Disease. $85,000. CIs: Sunil Gupta, Svetha Venkatesh, **Thin Nguyen**. Funding source: Garvan Institute of Medical Research.
- 2019: A large-scale and fine-grained dataset for detection and recognition of animals in the wild. $17,000. CIs: Duc Thanh Nguyen, **Thin Nguyen**. Funding source: Deakin University Central Research Grants Scheme (CRGS).
- 2017: Social Media as Sensors for Mental Health. $20,000. CIs: **Thin Nguyen**. Funding source: Deakin University's CRGS.

- 2017: Large-scale Neural Embedding. $9,235. CIs: Dinh Phung, **Thin Nguyen**. Funding source: Trusting Social.
- 2017: Investigating the Australian far-right with online data. $10,000. CIs: Matteo Vergani, **Thin Nguyen**. Funding source: Deakin University's CRGS.
- 2017: mHealth for Automatic Dietary Assessment and Health Analysis. $5,000. CIs: Duc Thanh Nguyen, **Thin Nguyen**. Funding source: Deakin University's CRGS.
- 2016–2020: Centre of Excellence in Big Data and Machine Learning. $1.6 million. CIs: Svetha Venkatesh, Dinh Phung, Alistair Shilton, Budhaditya Saha, Wei Luo, Truyen Tran, Sunil Gupta, Santu Rana, **Thin Nguyen**, Trung Le, Tu Nguyen, Vu Nguyen, Cheng Li. Funding source: Telstra.
- 2016–2017: Improving Mental Health through Social Media. $40,000. CIs: **Thin Nguyen**, Svetha Venkatesh, Dinh Phung. Funding source: Black Dog Institute, UNSW.
- 2016: Watson Data Analytics. $33,000. CIs: Wei Luo, **Thin Nguyen**, Dinh Phung. Funding source: Deakin University.

▪ Professional Activities

Current HDR Supervision

- Dang Anh Khoa Nguyen, *Towards scalable causal discovery*.
- Hai Chan Nguyen, *Generalization and Reasoning Abilities of Foundation Models*.
- Duc Kieu, *Generative Models for Domain Generalization*.
- Toan Doan (with Sunil Gupta), *Causal Guidance for Large Language Models*.
- Yafeng Wu (with Hung Le), *Multi-Modal Time-Series Reasoning with Large Language Models*.

Completed HDR Supervision

- Quang-Duy Tran, *Probabilistic Modelling Approaches for Causal Discovery Under Uncertainty*, Completed: 2026.
- Nu Hoang, *Scalable Causal Discovery*, Completed: 2026.
- Khanh Toan Nguyen, *Improving Generalisation in Discriminative and Generative Machine Learning Models*, Completed: 2026.
- Azhar Mohammed, *Enhancing Artificial Intelligence Systems with Causal Reasoning*, Completed: 2025.
- Bao Duong, *Advanced Machine Learning for Causal Discovery*, Completed: 2024. Winner of Deakin's Thesis Award and recipient of a Deakin University Postdoctoral Research Fellowship (DUPRF).
- Tri Minh Nguyen, *Machine Learning for Drug-Target Interaction Prediction*, Completed: 2022. Nominee of Deakin's Thesis Award and recipient of a Deakin University Postdoctoral Research Fellowship (DUPRF).
- Hung Nguyen, *Machine Learning Approaches for Population Health Analytics through Social Media*, Completed: 2020.
- Haripriya Harikumar (with Santu Rana and Sunil Gupta), *Machine Learning to Fight Addiction using Social Media*, Completed: 2018.
- Bo Duy Dao, *Social Media as Sensor for Healthcare: A Machine Learning Approach*, Completed: 2016.

Reviewing Services

Grant Review Panels

- National Health and Medical Research Council (NHMRC), Investigator Grants 2025 (9 applications, reviewed in 2024).
- Swiss National Science Foundation (SNSF), 2025.

External Thesis Examination

- External PhD Thesis Examiner: University of Technology Sydney (2026); University of Canberra (2025); University of Wollongong (2025); University of Sydney (2020).
- External Master by Research Thesis Examiner: Edith Cowan University (2025).

Conference Reviewing

Peer reviewer and programme committee member for leading venues in artificial intelligence, machine learning, data mining, natural language processing, and causal learning. For conferences hosted on OpenReview alone, I reviewed 44+ submissions during 2024–2026, including:

- NeurIPS 2026 (4 manuscripts).
- AAAI 2025 (6), AAAI 2026 (6).
- KDD 2024 (6), KDD 2025 (5), KDD 2026 Cycle 2 (4).
- ACL Rolling Review 2024 October cycle (1), ACL Rolling Review 2026 January cycle (4).
- CLeaR 2024 (3), CLeaR 2025 (5).

Journal Reviewing

Reviewer for international journals in artificial intelligence, machine learning, bioinformatics, and computational biology, including Bioinformatics, Briefings in Bioinformatics, PLOS Computational Biology, IEEE Transactions on Affective Computing, and IEEE Journal of Biomedical and Health Informatics.

My journal-reviewing activities span a broad range of venues. For example, in 2023 alone I reviewed manuscripts for IEEE Transactions on Neural Networks and Learning Systems, Nature Communications, Applied Intelligence, Social Network Analysis and Mining, and SN Computer Science.

Talks and Tutorials

- 2025: Research seminar, “Causal artificial intelligence for robust and clear blue carbon estimation”, Macquarie University.
- 2024: Research seminar, “Identifying gene regulatory networks for diagnostic and treatment insights with causal artificial intelligence”, Garvan Institute, UNSW.
- 2024: Research seminar, “Repurposing drugs for psychiatric disorders with causal artificial intelligence”, IMPACT Institute, Deakin University.
- 2021: Tutorial, “Machine Learning and Reasoning for Drug Discovery”, ECML-PKDD.
- 2018: Best Performer talk, “Predict cell locations using gene expression”, DREAM Single Cell Transcriptomics Challenge.

▪ Publications

Journal Articles

1. Sindy Pinero, Xiaomei Li, Lin Liu, Jiuyong Li, Sang Hong Lee, Marnie Winter, **Thin Nguyen**, Junpeng Zhang, Thuc Duy Le. TACO: TabPFN Augmented Causal Outcomes for Early Detection of Long COVID. *Machine Learning: Science and Technology*, 2026.
2. Nu Hoang, Khanh Toan Nguyen, Bao Duong, Melanie Nichols, Vicki Brown, Kathryn Backholer, Steven Allender, **Thin Nguyen**. Causal Machine Learning for Understanding Heterogeneous Effects of Childhood Obesity Prevention. *International Journal of Data Science and Analytics*, 2026.
3. Bao Duong, Hung Le, Biwei Huang, **Thin Nguyen**. Reinforcement Learning for Causal Discovery without Acyclicity Constraints. *Transactions on Machine Learning Research (TMLR)*, 2025.
4. Sindy Pinero, Xiaomei Li, Junpeng Zhang, Marnie Winter, Sang Hong Lee, **Thin Nguyen**, Lin Liu, Jiuyong Li, Thuc Duy Le. Omics-based computational approaches for biomarker identification, prediction, and treatment of Long COVID. *Critical Reviews in Clinical Laboratory Sciences*, 2025, pp. 1–27.
5. Sindy Pinero, Xiaomei Li, Lin Liu, Jiuyong Li, Sang Hong Lee, Marnie Winter, **Thin Nguyen**, Junpeng Zhang, Thuc Duy Le. Integrative multi-omics framework for causal gene discovery in long COVID. *PLOS Computational Biology*, 2025, pp. e1013725.
6. Mohamed Kefi, Tien Dat Pham, **Thin Nguyen**, Mark G Tjoelker, Viola Devasirvatham, Kenichi Kashiwagi. Improving Olive Yield Prediction Using Landsat Multispectral Data and Advanced Ensemble Learning in Tunisia. *Journal of Sustainable Agriculture and Environment*, 2025, pp. e70118.
7. Bao Duong, Manisha Senadeera, Khanh Toan Nguyen, Melanie Nichols, Kathryn Backholer, Steven Allender, **Thin Nguyen**. Utilising causal inference methods to estimate effects and strategise interventions in observational health data. *PLOS ONE*, 2024, pp. e0314761. DOI: 10.1371/journal.pone.0314761.
8. Bao Duong, **Thin Nguyen**. Normalizing Flows for Conditional Independence Testing. *Knowledge and Information Systems*, 2024, pp. 357–380. DOI: 10.1007/s10115-023-01964-w.
9. Quang-Duy Tran, Phuoc Nguyen, Bao Duong, **Thin Nguyen**. Constraining Acyclicity of Differentiable Bayesian Structure Learning with Topological Ordering. *Knowledge and Information Systems*, 2024, pp. 5605–5630. DOI: 10.1007/s10115-024-02140-4.
10. Khanh Toan Nguyen, Duc Kieu, Bao Duong, Tung Kieu, Kien Do, **Thin Nguyen**, Bac Le. Class-incremental learning with causal relational replay. *Expert Systems with Applications*, 2024, pp. 123901. DOI: 10.1016/j.eswa.2024.123901.
11. Tri Minh Nguyen, **Thin Nguyen**, Truyen Tran. Learning to discover medicines. *International Journal of Data Science and Analytics*, 2023, pp. 301–316. DOI: 10.1007/s41060-022-00371-8.
12. Tri Minh Nguyen, Thomas P Quinn, **Thin Nguyen**, Truyen Tran. Explaining black box drug target prediction through model agnostic counterfactual samples. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2023, pp. 1020–1029. DOI: 10.1109/TCBB.2022.3190266.
13. Haripriya Harikumar, Santu Rana, Sunil Gupta, **Thin Nguyen**, Ramachandra Kaimal, Svetha Venkatesh. Prescriptive analytics with differential privacy. *International Journal of Data Science and Analytics*, 2022, pp. 123–138. DOI: 10.1007/s41060-021-00286-w.
14. Tri Minh Nguyen, **Thin Nguyen**, Truyen Tran. Mitigating cold-start problems in drug-target affinity prediction with interaction knowledge transferring. *Briefings in Bioinformatics*, 2022, pp. bbac269. DOI: 10.1093/bib/bbac269.
15. Thanh-Tuan Nguyen, Giang Nguyen, **Thin Nguyen**, Duc-Hau Le. Graph convolutional networks for drug response prediction. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2022, pp. 146–154. DOI: 10.1109/TCBB.2021.3060430.
16. Tri Minh Nguyen, **Thin Nguyen**, Thao Minh Le, Truyen Tran. GEFA: early fusion approach in drug-target affinity prediction. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2022, pp. 718–728. DOI: 10.1109/TCBB.2021.3094217.

17. Dung Nguyen, Duc Thanh Nguyen, Rui Zeng, Thanh Thi Nguyen, Son N Tran, **Thin Nguyen**, Sridha Sridharan, Clinton Fookes. Deep auto-encoders with sequential learning for multimodal dimensional emotion recognition. *IEEE Transactions on Multimedia*, 2022, pp. 1313–1324. DOI: 10.1109/TMM.2021.3063612.
18. Vu V H Pham, Lin Liu, Cameron P Bracken, **Thin Nguyen**, Gregory J Goodall, Jiuyong Li, Thuc Duy Le. pDriver: A novel method for unravelling personalized coding and miRNA cancer drivers. *Bioinformatics*, 2021, pp. 3285–3292. DOI: 10.1093/bioinformatics/btab262.
19. Vu V H Pham, Xiaomei Li, Buu Truong, **Thin Nguyen**, Lin Liu, Jiuyong Li, Thuc Duy Le. The winning methods for predicting cellular position in the DREAM single-cell transcriptomics challenge. *Briefings in Bioinformatics*, 2021, pp. bbaa181. DOI: 10.1093/bib/bbaa181.
20. Bridianne O'Dea, Tjeerd W Boonstra, Mark E Larsen, **Thin Nguyen**, Svetha Venkatesh, Helen Christensen. The relationship between linguistic expression in blog content and symptoms of depression, anxiety, and suicidal thoughts: A longitudinal study. *PLOS ONE*, 2021, pp. e0251787. DOI: 10.1371/journal.pone.0251787.
21. **Thin Nguyen**, Samuel C Lee, Thomas P Quinn, Buu Truong, Xiaomei Li, Truyen Tran, Svetha Venkatesh, Thuc Duy Le. PAN: Personalized Annotation-based Networks for the prediction of breast cancer relapse. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2021, pp. 2841–2847. DOI: 10.1109/TCBB.2021.3076422.
22. **Thin Nguyen**, Hang Le, Thomas P Quinn, Tri Minh Nguyen, Thuc Duy Le, Svetha Venkatesh. GraphDTA: Predicting drug-target binding affinity with graph neural networks. *Bioinformatics*, 2021, pp. 1140–1147. DOI: 10.1093/bioinformatics/btaa921.
23. Thanh Thi Nguyen, Pubudu N Pathirana, **Thin Nguyen**, Henry Nguyen, Asim Bhatti, Dinh C Nguyen, Dung Tien Nguyen, Ngoc Duy Nguyen, Douglas Creighton, Mohamed Abdelrazek. Genomic mutations and changes in protein secondary structure and solvent accessibility of SARS-CoV-2 (COVID-19 virus). *Scientific Reports*, 2021. DOI: 10.1038/s41598-021-83105-3.
24. Adi L Tarca, Bálint Ármin Pataki, Roberto Romero, Marina Sirota, Yuanfang Guan, Rintu Kutum, Nardhy Gomez-Lopez, Bogdan Done, Gaurav Bhatti, Thomas Yu, et al. Crowdsourcing assessment of maternal blood multi-omics for predicting gestational age and preterm birth. *Cell Reports Medicine*, 2021, pp. 100323. DOI: 10.1016/j.xcrm.2021.100323.
25. Anna Cichońska, Balaguru Ravikumar, Robert J Allaway, Fangping Wan, Sungjoon Park, Olexandr Isayev, Shuya Li, Michael Mason, Andrew Lamb, Ziaurrehman Tanoli, et al. Crowdsourced mapping of unexplored target space of kinase inhibitors. *Nature Communications*, 2021, pp. 1–18. DOI: 10.1038/s41467-021-23165-1.
26. Hung Nguyen, **Thin Nguyen**, Duc Thanh Nguyen. A graph-based approach for population health analysis using geo-tagged tweets. *Multimedia Tools and Applications*, 2021, pp. 7187–7204. DOI: 10.1007/s11042-020-10034-0.
27. **Thin Nguyen**, Mark E Larsen, Bridianne O'Dea, Hung Nguyen, Duc Thanh Nguyen, John Yearwood, Dinh Phung, Svetha Venkatesh, Helen Christensen. Using spatiotemporal distribution of geocoded Twitter data to predict US county-level health indices. *Future Generation Computer Systems*, 2020, pp. 620–628. DOI: 10.1016/j.future.2018.01.014.
28. **Thin Nguyen**, Sunil Gupta, Jaishankar Raman, Rinaldo Bellomo, Svetha Venkatesh. Geolocated Twitter-based population mobility in Victoria, Australia, during the staged COVID-19 restrictions. *Critical Care and Resuscitation*, 2020, pp. 293–294.
29. Jovan Tanevski, **Thin Nguyen**, Buu Truong, Nikos Karaiskos, Mehmet Eren Ahsen, Xinyu Zhang, Chang Shu, Ke Xu, Xiaoyu Liang, Ying Hu, et al. Gene selection for optimal prediction of cell position in tissues from single-cell transcriptomics data. *Life Science Alliance*, 2020, pp. e202000867. DOI: 10.26508/lsa.202000867.
30. Samuel C Lee, Thomas P Quinn, Jerry Lai, Sek Won Kong, Irva Hertz-Picciotto, Stephen J Glatt, Tamsyn M Crowley, Svetha Venkatesh, **Thin Nguyen**. Solving for X: Evidence for sex-specific autism biomarkers across multiple transcriptomic studies. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*, 2019, pp. 377–389. DOI: 10.1002/ajmg.b.32701.
31. Thomas P Quinn, Samuel C Lee, Svetha Venkatesh, **Thin Nguyen**. Improving the classification of neuropsychiatric conditions using gene ontology terms as features. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*, 2019. DOI: 10.1002/ajmg.b.32727.
32. Thomas P Quinn, **Thin Nguyen**, Samuel C Lee, Svetha Venkatesh. Cancer as a tissue anomaly: classifying tumor transcriptomes based only on healthy data. *Frontiers in Genetics*, 2019, pp. 599. DOI: 10.3389/fgene.2019.00599.
33. Kien Do, Truyen Tran, **Thin Nguyen**, Svetha Venkatesh. Attentional multilabel learning over graphs: a message passing approach. *Machine Learning*, 2019, pp. 1–25. DOI: 10.1007/s10994-019-05782-6.
34. Hung Nguyen, **Thin Nguyen**, Duc Thanh Nguyen. An empirical study on prediction of population health through social media. *Journal of Biomedical Informatics*, 2019, pp. 103277. DOI: 10.1016/j.jbi.2019.103277.
35. Samuel C Lee, Alistair Quinn, **Thin Nguyen**, Svetha Venkatesh, Thomas P Quinn. A cross-cancer metastasis signature in the microRNA-mRNA axis of paired tissue samples. *Molecular Biology Reports*, 2019, pp. 5919–5930. DOI: 10.1007/s11033-019-05025-w.
36. Duc Thanh Nguyen, Ngoc-Son Vu, Thanh-Toan Do, **Thin Nguyen**, John Yearwood. Improving Chamfer template matching using image segmentation. *IEEE Signal Processing Letters*, 2018, pp. 1635–1639. DOI: 10.1109/LSP.2018.2862645.
37. **Thin Nguyen**, Svetha Venkatesh, Dinh Phung. Academia versus social media: A psycho-linguistic analysis. *Journal of Computational Science*, 2018, pp. 228–237. DOI: 10.1016/j.jocs.2017.08.011.

38. **Thin Nguyen**, Bridianne O'Dea, Mark E Larsen, Dinh Phung, Svetha Venkatesh, Helen Christensen. Using linguistic and topic analysis to classify sub-groups of online depression communities. *Multimedia Tools and Applications*, 2017, pp. 10653–10676. DOI: 10.1007/s11042-015-3128-x.
39. Bo Dao, **Thin Nguyen**, Svetha Venkatesh, Dinh Phung. Latent sentiment topic modelling and nonparametric discovery of online mental health-related communities. *International Journal of Data Science and Analytics*, 2017, pp. 209–231. DOI: 10.1007/s41060-017-0073-y.
40. **Thin Nguyen**, Mark E Larsen, Bridianne O'Dea, Duc Thanh Nguyen, John Yearwood, Dinh Phung, Svetha Venkatesh, Helen Christensen. Kernel-based features for predicting population health indices from geocoded social media data. *Decision Support Systems*, 2017, pp. 22–31. DOI: 10.1016/j.dss.2017.06.010.
41. **Thin Nguyen**, Mark E Larsen, Bridianne O'Dea, Dinh Phung, Svetha Venkatesh, Helen Christensen. Estimation of the prevalence of adverse drug reactions from social media. *International Journal of Medical Informatics*, 2017, pp. 130–137. DOI: 10.1016/j.ijmedinf.2017.03.013.
42. Budhaditya Saha, **Thin Nguyen**, Dinh Phung, Svetha Venkatesh. A framework for classifying online mental health-related communities with an interest in depression. *IEEE Journal of Biomedical and Health Informatics*, 2016, pp. 1008–1015. DOI: 10.1109/JBHI.2016.2543741.
43. **Thin Nguyen**, Truyen Tran, Wei Luo, Sunil Gupta, Santu Rana, Dinh Phung, Melanie Nichols, Lynne Millar, Svetha Venkatesh, Steven Allender. Web search activity data accurately predict population chronic disease risk in the USA. *Journal of Epidemiology and Community Health*, 2015, pp. 693–699. DOI: 10.1136/jech-2014-204523.
44. Wei Luo, **Thin Nguyen**, Melanie Nichols, Truyen Tran, Santu Rana, Sunil Gupta, Dinh Phung, Svetha Venkatesh, Steven Allender. Is demography destiny? Application of machine learning techniques to accurately predict population health outcomes from a minimal demographic dataset. *PLOS ONE*, 2015, pp. e0125602. DOI: 10.1371/journal.pone.0125602.
45. **Thin Nguyen**, Thi Duong, Svetha Venkatesh, Dinh Phung. Autism blogs: Expressed emotion, language styles and concerns in personal and community settings. *IEEE Transactions on Affective Computing*, 2015, pp. 312–323. DOI: 10.1109/TAFFC.2015.2400912.
46. **Thin Nguyen**, Dinh Phung, Brett Adams, Svetha Venkatesh. Mood sensing from social media texts and its applications. *Knowledge and Information Systems*, 2014, pp. 667–702. DOI: 10.1007/s10115-013-0628-8.
47. **Thin Nguyen**, Dinh Phung, Bo Dao, Svetha Venkatesh, Michael Berk. Affective and content analysis of online depression communities. *IEEE Transactions on Affective Computing*, 2014, pp. 217–226. DOI: 10.1109/TAFFC.2014.2315623.
48. **Thin Nguyen**, Dinh Phung, Brett Adams, Svetha Venkatesh. Event extraction using behaviors of sentiment signals and burst structure in social media. *Knowledge and Information Systems*, 2013, pp. 279–304. DOI: 10.1007/s10115-012-0494-9.
49. Dinh Phung, Sunil Gupta, **Thin Nguyen**, Svetha Venkatesh. Connectivity, online social capital, and mood: A Bayesian nonparametric analysis. *IEEE Transactions on Multimedia*, 2013, pp. 1316–1325. DOI: 10.1109/TMM.2013.2264274.

Peer-reviewed Conferences and Workshops

1. Duc Kieu, Kien Do, Tuan Hoang, Thao Minh Le, Tung Kieu, Dang Nguyen, **Thin Nguyen**. Universal Multi-Domain Translation via Diffusion Routers. *ICLR*, 2026.
2. Chan Nguyen, Hung Le, **Thin Nguyen**. Enhancing Model Explainability and Performance via Attention-guided Gradient Restriction. *ECML-PKDD*, 2026.
3. Uyen Le, **Thin Nguyen**, Khanh Toan Nguyen, Toan Doan, Trung Le, Bac Le. Causal Direct Preference Optimization for Language Model Alignment. *Findings of EACL*, 2026, pp. 1098–1113.
4. Toan Doan, Uyen Le, **Thin Nguyen**. Causal Activation Steering via Sparse Mediation. *Findings of EACL*, 2026, pp. 1079–1097.
5. Toan Doan, **Thin Nguyen**, Sunil Gupta. A Geometric Information Bottleneck for Activation Steering. *KDD*, 2026.
6. Hoang Tran Vuong, Linh Ngo Van, Dang Nguyen, **Thin Nguyen**, Phuoc Nguyen, Mehrtash Harandi, Trung Le. *f*-Divergence Self-Play for Tabular Anomaly Detection via Large Language Models. *ICML*, 2026.
7. Khanh Toan Nguyen, Kien Do, Duc Kieu, **Thin Nguyen**. h-Edit: Effective and Flexible Diffusion-Based Editing via Doob's h-Transform. *CVPR*, 2025, pp. 28490–28501.
8. Khoa Nguyen, Bao Duong, Viet Huynh, **Thin Nguyen**. Neural Autoregressive Flows for Markov Boundary Learning. *ICDM*, 2025.
9. Quang-Duy Tran, Bao Duong, Phuoc Nguyen, **Thin Nguyen**. Identifying Causal Direction via Variational Bayesian Compression. *ICML*, 2025.
10. Khoa Nguyen, Viet Huynh, Binh Tran, Tri Pham, Tin Huynh, **Thin Nguyen**. Clustering-Based Meta Bayesian Optimization with Theoretical Guarantee. *PAKDD*, 2025, pp. 210–223.
11. Bao Duong, Sunil Gupta, **Thin Nguyen**. Causal Discovery via Bayesian Optimization. *ICLR*, 2025.
12. Duc Kieu, Kien Do, Khanh Toan Nguyen, Dang Nguyen, **Thin Nguyen**. Bidirectional Diffusion Bridge Models. *KDD*, 2025, pp. 1139–1148.
13. Bao Duong, Nu Hoang, **Thin Nguyen**. Amortized Conditional Independence Testing. *PAKDD*, 2025, pp. 410–423.
14. Nu Hoang, Bao Duong, **Thin Nguyen**. Scalable Variational Causal Discovery Unconstrained by Acyclicity. *ECAI*, 2024.

15. Phuoc Nguyen, Truyen Tran, Sunil Gupta, **Thin Nguyen**, Svetha Venkatesh. Root Cause Explanation of Outliers under Noisy Mechanisms. *AAAI*, 2024. DOI: 10.1609/aaai.v38i18.30035.
16. Quang-Duy Tran, Bao Duong, Phuoc Nguyen, **Thin Nguyen**. Robust Estimation of Causal Heteroscedastic Noise Models. *SDM*, 2024. DOI: 10.1137/1.9781611978032.90.
17. Dang Nguyen, Sunil Gupta, Kien Do, **Thin Nguyen**, Svetha Venkatesh. Generating Realistic Tabular Data with Large Language Model. *ICDM*, 2024.
18. Nu Hoang, Bao Duong, **Thin Nguyen**. Enabling Causal Discovery in Post-Nonlinear Models with Normalizing Flows. *ECAI*, 2024.
19. Khanh Toan Nguyen, Kien Do, Bao Duong, **Thin Nguyen**. Domain Generalisation via Risk Distribution Matching. *WACV*, 2024. DOI: 10.1109/WACV57701.2024.00277.
20. Bao Duong, **Thin Nguyen**. Heteroscedastic Causal Structure Learning. *ECAI*, 2023, pp. 598–605. DOI: 10.3233/FAIA230321.
21. Quang-Duy Tran, Phuoc Nguyen, Bao Duong, **Thin Nguyen**. Differentiable Bayesian Structure Learning with Acyclicity Assurance. *ICDM*, 2023, pp. 598–607. DOI: 10.1109/ICDM58522.2023.00069.
22. Bao Duong, **Thin Nguyen**. Diffeomorphic information neural estimation. *AAAI*, 2023, pp. 7468–7475. DOI: 10.1609/aaai.v37i6.25908.
23. Khanh Toan Nguyen, Kien Do, Duc Thanh Nguyen, Bao Duong, **Thin Nguyen**. Causal Inference via Style Transfer for Out-of-distribution Generalisation. *KDD*, 2023, pp. 1746–1757. DOI: 10.1145/3580305.3599270.
24. Azhar Mohammed, Dang Nguyen, Bao Duong, Melanie Nichols, **Thin Nguyen**. Handling missing data with Markov boundary. *ADMA*, 2022, pp. 319–333. DOI: 10.1007/978-3-031-22064-7_24.
25. Azhar Mohammed, Dang Nguyen, Bao Duong, **Thin Nguyen**. Efficient classification with counterfactual reasoning and active learning. *ACIIDS*, 2022, pp. 27–38. DOI: 10.1007/978-3-031-21743-2_3.
26. Bao Duong, **Thin Nguyen**. Conditional independence testing via latent representation learning. *ICDM*, 2022. DOI: 10.1109/ICDM54844.2022.00022.
27. Tri Minh Nguyen, Azhar Mohammed, Bao Duong, **Thin Nguyen**. Causality-aided recommendation systems. *IJCNN*, 2022. DOI: 10.1109/IJCNN55064.2022.9892591.
28. Bao Duong, **Thin Nguyen**. Bivariate causal discovery via conditional divergence. *CLeaR*, 2022, pp. 236–252.
29. Tri Minh Nguyen, Thomas P Quinn, **Thin Nguyen**, Truyen Tran. Counterfactual explanation with multi-agent reinforcement learning for drug target prediction. *ICML Workshop on Interpretable Machine Learning in Healthcare*, 2021.
30. **Thin Nguyen**, Duc Thanh Nguyen, Thuc Duy Le, Svetha Venkatesh. MrPC: Causal structure learning in distributed systems. *ICONIP*, 2020, pp. 87–94. DOI: 10.1007/978-3-030-63820-7_10.
31. Junpeng Zhang, **Thin Nguyen**, Buu Truong, Lin Liu, Jiuyong Li, Thuc Duy Le. Computational methods for predicting Autism Spectrum Disorder from gene expression data. *ADMA*, 2020, pp. 395–409. DOI: 10.1007/978-3-030-65390-3_31.
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