Tuan Dung (Daniel) Ngo

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RESEARCH INTERESTS

Machine Learning Theory, Algorithmic Game Theory, Incentive-Aware Machine Learning, Incentivized Exploration, Causal Inference, Bandits Algorithm, Differential Privacy, Strategic Learning, Federated Learning, Uncertainty Quantification, Watermarking LLMs.

EDUCATION

 University of Minnesota, Minneapolis, MN
 Au

 Computer Science Ph.D. Student
 Advisors: Steven Wu and Maria Gini

 Thesis: Incentive-Aware Machine Learning for Social Welfare Maximization under Uncertainty

Dickinson College, Carlisle, PA Bachelor of Science: Computer Science (summa cum laude) Bachelor of Science: Mathematics (summa cum laude)

EMPLOYMENT

J.P.Morgan AI Research AI Research Associate

J.P.Morgan AI Research AI Research Summer Associate

PUBLICATIONS

Conference Proceedings:

- 1. Ally Yalei Du^{*}, **Daniel Ngo**^{*}, and Zhiwei Steven Wu. *Reconciling Model Multiplicity for Downstream Decision Making*. International Conference on Learning Representations (ICLR), 2025.
- Xinyan Hu^{*}, Daniel Ngo^{*}, Zhiwei Steven Wu, and Aleksandrs Slivkins. Incentivizing Combinatorial Bandit Exploration. Neural Information Processing Systems (NeurIPS), 2022.
- 3. Daniel Ngo^{*}, Giuseppe Vietri^{*}, and Zhiwei Steven Wu. Improved Regret for Differentially Private Exploration in LinearMDP. International Conference on Machine Learning (ICML), 2022.
- Keegan Harris, Daniel Ngo^{*}, Logan Stapleton^{*}, Hoda Heidari, and Zhiwei Steven Wu. Strategic Instrumental Variable Regression: Recovering Causal Relationships From Strategic Responses. International Conference on Machine Learning (ICML), 2022.
- 5. Daniel Ngo^{*}, Logan Stapleton^{*}, Vasilis Syrgkanis, and Zhiwei Steven Wu. Incentivizing Exploration with Algorithmic Instruments. International Conference on Machine Learning (ICML), 2021.

Working Papers:

- 1. Daniel Ngo, Daniel Scott, Saheed Obitayo, Vamsi K. Potluru, and Manuela Veloso. Adaptive and Robust Watermark for Generative Tabular Data. https://arxiv.org/pdf/2409.14700
- 2. Daniel Ngo^{*}, Keegan Harris^{*}, Anish Agarwal, Vasilis Syrgkanis, and Zhiwei Steven Wu. Incentive-Aware Synthetic Control: Accurate Counterfactual Estimation via Incentivized Exploration. https://arxiv.org/pdf/2312.16307v1.pdf
- 3. Shengyuan Hu^{*}, **Daniel Ngo**^{*}, Shuran Zheng^{*}, Virginia Smith, and Zhiwei Steven Wu. Federated Learning as a Network Effects Game. https://arxiv.org/pdf/2302.08533.pdf
- 4. Jane Hsieh, Angie Zhang, Erik Chou, Mialy Rasetarinera, Daniel Ngo, Jason Carpenter, Min Kyung Lee, and Haiyi Zhu. Supporting Worker Needs and Advancing Policy: Exploring Gig Worker-Centered Data-Sharing Alternatives. https://arxiv.org/pdf/2412.02973

AWARDS AND HONORS

GAGE Fellowship University of Minnesota August 2019, May 2020

August 2019 — December 2024

August 2015 — May 2019

New York, NY January 2025 — Present

New York, NY Summer 2024

^{*}Denotes equal contribution and/or alphabetical ordering

Alpha Lambda Delta

Math honors society, inducted as a junior.

Upsilon Pi Epsilon

Computer Science honors society, inducted as a junior.

TALKS

- 1. "Incentivizing Combinatorial Bandit Exploration" INFORMS Annual Meeting (forthcoming October 2024)
- 2. "Incentive-Aware Synthetic Control: Accurate Counterfactual Estimation via Incentivized Exploration" INFORMS Annual Meeting (October 2023)
- 3. "Incentivizing Exploration with Algorithmic Instruments" IMCL 2021 (July 2021, Short Presentation)

SERVICE

Conference Reviewer

- Artificial Intelligence and Statistics Conference (AISTAT) 2025
- Causal Learning and Reasoning (CLeaR) 2023
- International Conference on Learning Representations (ICLR) 2025, 2024
- International Conference on Machine Learning (ICML) 2025, 2024, 2023, 2022, 2021
- Conference on Neural Information Processing Systems (NeurIPS) 2024, 2023, 2022, 2021

TEACHING

- Guest Lecturer: Human AI Interaction (Fall 2023). Instructor: Haiyi Zhu
- Teaching Assistant: Algorithms and Data Structures (Fall 2020). Instructor: Carl Sturtivant

April 2018