

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.

EDUCATION

University of Minnesota, Minneapolis, MN August 2019 — Present
Computer Science Ph.D. Student
Advisors: Steven Wu and Maria Gini

Dickinson College, Carlisle, PA August 2015 — May 2019
Bachelor of Science: Computer Science (*summa cum laude*)
Bachelor of Science: Mathematics (*summa cum laude*)

PUBLICATIONS

Conference Proceedings:

- Xinyan Hu*, **Daniel Ngo***, Zhiwei Steven Wu, and Aleksandrs Slivkins. *Incentivizing Combinatorial Bandit Exploration*. Neural Information Processing Systems (NeurIPS), 2022.
- 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.
- Daniel Ngo***, Logan Stapleton*, Vasilis Syrgkanis, and Zhiwei Steven Wu. *Incentivizing Exploration with Algorithmic Instruments*. International Conference on Machine Learning (ICML), 2021.

Working Papers:

- Ally Yalei Du*, **Daniel Ngo***, and Zhiwei Steven Wu. *Reconciling Model Multiplicity for Downstream Decision Making*. <https://arxiv.org/pdf/2405.19667>
- 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>
- 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>
- 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*

AWARDS AND HONORS

GAGE Fellowship August 2019, May 2020
University of Minnesota

Alpha Lambda Delta April 2018
Math honors society, inducted as a junior

Upsilon Pi Epsilon April 2018
Computer Science honors society, inducted as a junior

TALKS

- "*Incentive-Aware Synthetic Control: Accurate Counterfactual Estimation via Incentivized Exploration*"
INFORMS Annual Meeting (October 2023)
- "*Incentivizing Exploration with Algorithmic Instruments*"

*Denotes equal contribution and/or alphabetical ordering

IMCL 2021 (July 2021, Short Presentation)

SERVICE

Conference Reviewer:

- Causal Learning and Reasoning (CLear) 2023
- International Conference on Learning Representations (ICLR) 2025, 2024
- International Conference on Machine Learning (ICML) 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 Sturivant