Dung (Daniel) Ngo

Computer Science Ph.D. Candidate, University of Minnesota, Minneapolis, MN
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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   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)*

EMPLOYMENT

J.P.Morgan AI Research   New York, NY
AI Research Summer Associate   Summer 2024

PUBLICATIONS

Conference Proceedings:

1. Xinyan Hu*, **Daniel Ngo***, Zhiwei Steven Wu, and Aleksandrs Slivkins.*Incentivizing Combinatorial Bandit Exploration.* Neural Information Processing Systems (NeurIPS), 2022.
2. **Daniel Ngo***, Giuseppe Vietri*, and Zhiwei Steven Wu. *Improved Regret for Differentially Private Exploration in LinearMDP.* International Conference on Machine Learning (ICML), 2022.
3. 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.
4. **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. Ally Yalei Du*, **Daniel Ngo***, and Zhiwei Steven Wu. *Reconciling Model Multiplicity for Downstream Decision Making.* https://arxiv.org/pdf/2405.19667
3. **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
4. 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
5. 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.

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*Denotes equal contribution and/or alphabetical ordering

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) 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