# 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

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 Summer 2024

AI Research Summer Associate

## **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
- 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.

<sup>\*</sup>Denotes equal contribution and/or alphabetical ordering

Dung (Daniel Ngo) October 2024

## **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