Connor Douglas

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U.S. Citizen

Bio

My research interests broadly lie at the intersection of computation and economics. Specifically, I am interested in data-driven decision-making, adaptive experimentation, sampling techniques for language model training, and personalization.

I am grateful to be supported by the NSF Graduate Research Fellowship Program (GRFP) and NYU Stern doctoral program.

Interests: *machine learning, reinforcement learning, data-driven decision making, personalization, pricing, markets, multi-agent systems*

Education

New York University, Stern School of Business 2022 - Present
Ph.D. Information Systems — Technology, Operations, & Statistics department *New York, NY*

Washington University in St. Louis 2018 - 2022
B.S. Computer Science & Economics — McKelvey School of Engineering *St. Louis, MO*

- *Grade:* 3.98/4.0, *Summa Cum Laude*
- *Minor:* Design

Professional Experience

United Nations Nov. 2023 – May 2024
Research Fellow *New York, NY*
Adressing mis/disinformation in peacekeeping

- Constructed novel method of coordinated behavior detection through semantic similarity and time differentials
- Studied methods for identifying mis/disinformation
- Built semantic search and clustering functionality in monitoring tool

Genentech May 2020 - May 2021
Software Engineering Intern *South San Francisco, CA*

- Developed novel technique for creating structured data from unstructured clinical trial protocols
- Led project in developing full-stack clinical study management tool
- Designed and built front-end of question-answering tool ingesting protocol documents

Publications

Naive Algorithmic Collusion: When Do Bandit Learners Cooperate and When Do They Compete?
Connor Douglas, Foster Provost, Arun Sundararajan
Proceedings of ICIS 2024 (forthcoming). 2024.

Computing an Optimal Strategy in a Baseball At-bat
Connor Douglas, Everett Witt, Mia Bendy, Yevgeniy Vorobeychik
Proceedings of FLAIRS-36 Conference. 2023.

Techniques for Abstraction of Unstructured Clinical Trial Health Data
Lukas Corey*, Jennifer Crawford*, Connor Douglas*, Benjamin Fernandez* *Equal Contributions
U.S. Patent Office Filing (PCT/US22/30369). 2022.

Research-in-Progress

Domain Adaptation of Sentence-level Embedding Models with LLM Feedback
Connor Douglas

Teaching Experience

Microeconomics (Undergraduate) Fall 2024
Teaching Fellow
New York University — Stern School of Business

Intro. to Analytics and AI (Graduate) Summer 2024
Teaching Fellow
New York University — Stern School of Business

Data Science for Business (Graduate) Spring 2024
Teaching Fellow
New York University — Stern School of Business

Intro. to Econometrics (Undergraduate) Spring 2022
Teaching Assistant
Washington University in St. Louis — Economics Department

Data Structures & Algorithms (Undergraduate) Fall 2019, Spring 2020
Teaching Assistant
Washington University in St. Louis — Computer Science Department

Institutional Service

ISPOC 2024
Associate Organizer

Tau Beta Pi (WUSTL Chapter) 2021-2022
President

Engineers Without Borders (WUSTL Chapter) 2019-2021
Treasurer

Presentations and Invited Talks

Topics in Data Science: Guest Lecture on Multi-armed Bandits and Reinforcement Learning. 2024.

Topics in Data Science: Guest Lecture on Multi-armed Bandits and Reinforcement Learning. 2024.

FLAIRS-36 Conference: Oral presentation on *Computing an Optimal Strategy in a Baseball At-bat.* 2023.

Grants and Awards

NSF GRFP: Award won in Economics (2024); Total Funding: $159,000

National Merit Scholarship: Scholarship awarded by Pfizer (2018); Total Funding: $12,000

Selected Graduate Coursework

- *Advanced Topics in Data Driven Decision Making*
- *No-regret Learning in Games*
- *Machine Learning and Sequential Decision Making*
- *Stochastic Processes*
- *Topics in Data Science*
- *Topics in Digital Economics*
- *Technical Foundations of Information Systems*
- *Real Analysis*
- *Convex Optimization*
- *Reinforcement Learning*
- *Human-in-the-loop Computation*