

NICHOLAS E. CORRADO

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EDUCATION

University of Wisconsin – Madison, Madison, WI

Present

Ph.D., Computer Sciences

Advisor: [Josiah Hanna](#)

University of Pittsburgh, Pittsburgh, PA

2019

B.S. in Physics, Mathematics; Minor in Computer Science

Thesis: [A Search for \$W_{bJ}\$ in Decays of \$\Upsilon\(5S\)\$: An Analysis Design Study](#)

Advisor: [Vladimir Savinov](#)

EXPERIENCE

University of Wisconsin–Madison | Graduate Research Assistant

Jan. 2021 – Present

Advisor: Josiah Hanna

- My research focuses on data collection and data quality in reinforcement learning.

Amazon | Applied Scientist Intern

July 2024 – Nov. 2024

Advisors: Julian Katz-Samuels, Hyokun Yun, Yi Xu

- Multi-objective alignment for LLMs with the [Rufus Team](#).

Sandia National Laboratories | Graduate Research Intern

May 2021 – Nov. 2023

Advisor: Drew Levin

- Reinforcement learning for power systems management. From May 2022 - Nov 2023, I served as a consultant.

University of Wisconsin – Madison | Graduate Research Assistant

Sept. 2019 – Sept. 2020

Advisor: Jignesh Patel

- Focused on query execution algorithms. I built the query execution and storage engines for [Hustle](#).

University of Pittsburgh | Undergraduate Research Assistant

Oct. 2016 - Aug. 2019

Advisor: Vladimir Savinov

- Designed the first search for W_{bJ} states in data collected by the Belle experiment.

PAPERS

Manuscripts Under Review

[M1] **When Can Model-Free Reinforcement Learning be Enough for Thinking?**

Josiah P. Hanna, Nicholas E. Corrado

arXiv preprint arXiv:2506.17124, 2025.

[M2] **Centralized Adaptive Sampling for Reliable Co-training of Independent Multi-Agent Policies**

[Nicholas E. Corrado](#), Josiah P. Hanna

Under Review, 2025.

[M3] **On-Policy Policy Gradient Reinforcement Learning Without On-Policy Sampling**


[Nicholas E. Corrado](#), Josiah P. Hanna

arXiv preprint arXiv:2311.08290, 2023.

Conference Publications.....

- [C1] **AutoMixAlign: Adaptive Data Mixing for Multi-Task Preference Optimization in LLMs**
Nicholas E. Corrado, Julian Katz-Samuels, Adithya M Devraj, Hyokun Yun, Chao Zhang, Yi Xu, Yi Pan, Bing Yin, Trishul Chilimbi
Association for Computational Linguistics (ACL), 2025.
- [C2] **Guided Data Augmentation for Offline Reinforcement Learning and Imitation Learning**
Nicholas E. Corrado, Yuxiao Qu, John U. Balis, Adam Labiosa, Josiah P. Hanna
Reinforcement Learning Conference (RLC), 2024.
- [C3] **Understanding when Dynamics-Invariant Data Augmentations Benefit Model-Free Reinforcement Learning Updates**
Nicholas E. Corrado, Josiah P. Hanna
International Conference on Learning Representations (ICLR), 2024.
- [C4] **Deep Reinforcement Learning for Distribution Power System Cyber-Resilience via Distributed Energy Resource Control**
Nicholas E. Corrado, Michael Livesay, Jay Johnson, Drew Levin
IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids (IEEE SmartGridComm), 2023.
- [C5] **Simulation-Acquired Latent Action Spaces for Dynamics Generalization**
Nicholas E. Corrado, Yuxiao Qu, Josiah P. Hanna
Conference on Lifelong Learning Agents (CoLLAs), 2022.

Workshop Papers.....

- [W1] **Thinking is Another Form of Control**
Josiah P. Hanna, Nicholas E. Corrado
Finding the Frame Workshop at the Reinforcement Learning Conference (RLC), 2025. **(Oral)**.
 **Awarded “Most-Thought-Provoking Paper”**
- [W2] **On-Policy Policy Gradient Reinforcement Learning Without On-Policy Sampling**
Nicholas E. Corrado, Josiah P. Hanna
Finding the Frame Workshop at the Reinforcement Learning Conference (RLC), 2025.

HONORS & AWARDS

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| ▶ Top Reviewer Award, NeurIPS 2024 (Top 8%) | 2024 |
| ▶ Sandia Employee Recognition Award. Awarded to < 10% of the Sandia workforce | 2023 |
| ▶ UW-Madison CS Department Scholarship (\$3000). Awarded to top graduate applicants. | 2019 |
| ▶ John O. Blumberg Memorial Scholarship (\$1000). Awarded to the top math major. | 2019 |
| ▶ Pennsylvania Space Grant Consortium Scholarship (third time, \$1500). Research funding. | 2019 |
| ▶ Emil Sanielevici Scholarship (\$4000). Research funding. | 2018 |
| ▶ Pennsylvania Space Grant Consortium Scholarship (second time, \$1500). Research funding. | 2018 |
| ▶ J&M Bigos Memorial Scholarship (\$10,000). Awarded for academic excellence. | 2018 |
| ▶ Sigma Pi Sigma Physics Honor Society | 2018 |
| ▶ American Physical Society DPF Travel Award (\$200) | 2017 |
| ▶ Peter F.M. Koehler Award (\$500). Awarded to the top physics major. | 2017 |
| ▶ Brackenridge Summer Research Fellowship (\$3500). Research funding. | 2017. |
| ▶ Rebecca Dytman Scholarship (\$10,000). Awarded for academic excellence in physics and astronomy. | 2017 |
| ▶ Pennsylvania Space Grant Consortium Scholarship (first time, \$1500). Research funding. | 2017 |

TALKS

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| ▶ On-Policy Policy Gradient Reinforcement Learning Without On-Policy Sampling | 2023 |
| University of Edinburgh RL Reading Group [video] | |

ADVISING

- ▶ Harry Huang (Undergraduate, University of Wisconsin-Madison, WISCERS program) 2025
- ▶ Nora Tseng (Undergraduate, University of Wisconsin-Madison, WISCERS program) 2024
- Next: **MS @ UC San Diego**
- ▶ Yuxiao Qu (Undergraduate, University of Wisconsin-Madison) 2021-2023
- Next: **PhD @ Carnegie Mellon University**

TEACHING EXPERIENCE

University of Wisconsin–Madison

- ▶ Research Mentor Program (Part of the Delta Program) Fall 2023
- ▶ Teaching Assistant for *Mathematical Foundations of Machine Learning (CS 761)* Fall 2021
- ▶ Head Teaching Assistant for *Intro to Computer Systems (CS 354)* Fall 2021
- ▶ Teaching Assistant for *Problem Solving for Engineers (CS 310)* Spring 2021
- ▶ Teaching Assistant for *Discrete Mathematics (CS 240)* Fall 2020

University of Pittsburgh

- ▶ Teaching Assistant for *Quantum Mechanics (PHYS 1370)* Fall 2018

SERVICE

- ▶ Reinforcement Learning Reading Group Coordinator (University of Wisconsin-Madison) 2025
- ▶ Graduate Student Mentor for [Wisconsin Science and Computing Emerging Research Stars \(WISCERS\)](#) 2024, 2025
- ▶ Graduate Student Mentor for Fall 2025 graduate cohort (University of Wisconsin-Madison) Fall 2025
- ▶ Invited Panelist, [Demystifying Graduate School](#) (University of Wisconsin-Madison) 2024, 2025
- ▶ [Sandia Machine Learning and Deep Learning \(MLDL\) Workshop](#). Designed a new RL competition. 2022

Reviewing

- ▶ Reviewer, TMLR 2025
- ▶ Reviewer, NeurIPS 2023, 2024, 2025
- ▶ Reviewer, ICML 2024, 2025
- ▶ Reviewer, ICLR 2024, 2025
- ▶ Senior Reviewer, RLC (Reinforcement Learning Conference) 2024, 2025
- ▶ Program Committee, AAAI 2024, 2025, 2026
- ▶ Reviewer, RA-L (Robotics and Automation Letters) 2024
- ▶ Reviewer, ICRA 2024

MEDIA

- ▶ [Training a dog and training a robot aren't so different](#) 2023

TECHNICAL SKILLS

Machine Learning & Data Science: Python ◦ PyTorch ◦ NumPy ◦ Pandas ◦ Matplotlib ◦ Jupyter ◦ Anaconda
Software Engineering: C++ ◦ C ◦ Git ◦ Bash