

NICHOLAS E. CORRADO

✉ ncorrado@wisc.edu

☎ (412) 417-1383

🌐 nicholascorrado.github.io

EDUCATION

University of Wisconsin – Madison, Madison, WI

Present

Ph.D., Computer Sciences

Research Interests: reinforcement learning, data collection, robotics

Advisor: [Josiah Hanna](#)

University of Pittsburgh, Pittsburgh, PA

2019

B.S. in Physics, B.S. in 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* ◦ Madison, WI Jan. 2021 – Present

Advisor: [Josiah Hanna](#)

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

Amazon, *Applied Scientist Intern* ◦ Palo Alto, CA 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* ◦ Albuquerque, NM (Remote) May 2021 – Nov. 2023

Advisor: [Drew Levin](#)

- Deep reinforcement learning for power systems management via distributed energy resource (DER) control [[C4](#)].
- From May 2022 - Nov 2023, I served as a consultant for reinforcement learning projects.

University of Wisconsin – Madison, *Graduate Research Assistant* ◦ Madison, WI Sept. 2019 – Sept. 2020

Advisor: [Jignesh Patel](#)

- Built the query execution and storage engines of [Hustle](#), a scalable data platform built on top of Apache Arrow.
- Designed a variant of the Lookahead Information Passing (LIP) query execution strategy with improved robustness in dynamic data environments and implemented it in Hustle.

University of Pittsburgh, *Undergraduate Research Assistant* ◦ Pittsburgh, PA Oct. 2016 - Aug. 2019

Advisor: [Vladimir Savinov](#)

- Designed and optimized the first search for new hadronic W_{bJ} states in data collected by the Belle experiment. [[thesis](#)]
- Created tools to monitor TOP Level-1 trigger performance for the Belle-II experiment.

PAPERS

Manuscripts Under Review

[M1] **Nicholas E. Corrado** and Josiah P. Hanna. [Centralized Adaptive Sampling for Reliable Co-training of Independent Multi-Agent Policies](#). Submitted. May 2025.

[M2] **Nicholas E. Corrado** and Josiah P. Hanna. [On-Policy Policy Gradient Reinforcement Learning Without On-Policy Sampling](#). Submitted. Feb. 2024. arXiv: 2311.08290. [[paper](#)]

Conference Publications

[C1] **Nicholas E. Corrado**, Julian Katz-Samuels, Adithya M Devraj, Hyokun Yun, Chao Zhang, Yi Xu, Yi Pan, Bing Yin, and Trishul Chilimbi. [AutoMixAlign: Adaptive Data Mixing for Multi-Task Preference Optimization in LLMs](#). In *The 63rd Annual Meeting of the Association for Computational Linguistics (ACL, Main Conference)*, 2025. [[paper](#)]

[C2] **Nicholas E. Corrado**, Yuxiao Qu, John U. Balis, Adam Labiosa, and Josiah P. Hanna. [Guided Data Augmentation for Offline Reinforcement Learning and Imitation Learning](#). In *Proceedings of the Reinforcement Learning Conference (RLC)*, 2024. [[paper](#)] [[video](#)]

- [C3] **Nicholas E. Corrado** and Josiah P. Hanna. Understanding when Dynamics-Invariant Data Augmentations Benefit Model-Free Reinforcement Learning Updates. In *Proceedings of the International Conference on Learning Representations (ICLR)*, May 2024. [\[paper\]](#)
- [C4] **Nicholas E. Corrado**, Michael Livesay, Jay Johnson, and Drew Levin. Deep Reinforcement Learning for Distribution Power System Cyber-Resilience via Distributed Energy Resource Control. In *IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids (IEEE SmartGridComm)*, 2023. [\[paper\]](#)
- [C5] **Nicholas E. Corrado**, Yuxiao Qu, and Josiah P. Hanna. Simulation-Acquired Latent Action Spaces for Dynamics Generalization. In *Proceedings of the 1st Conference on Lifelong Learning Agents (CoLLAs)*, 2022. [\[paper\]](#) [\[video\]](#) [\[website\]](#)

Technical Reports.....

- [T1] **Nicholas E. Corrado**, Michael Livesay, Tyson Bailey, and Drew Levin. Reinforcement Learning for Automatic Generation Control using a Kuramoto-like Model. 2023.
- [T2] **Nicholas E. Corrado** and Vladimir Savinov. Search for Decay $\Upsilon(5S) \rightarrow \gamma W_{bJ}$. *Belle Collaboration*, Belle Note 1522, 2019. [\[paper\]](#)
- [T3] **Nicholas Corrado** & Vladimir Savinov. Search for $\Upsilon(5S) \rightarrow \gamma W_{bJ}$. In *American Physical Society (APS) Meeting*, 2018. [\[abstract & slides\]](#)

HONORS & AWARDS

- ▶ **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

- ▶ **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
- ▶ Yuxiao Qu (Undergraduate, University of Wisconsin-Madison) 2021-2023
- Current Position: 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 reinforcement learning 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
- ▶ 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