

# Ryan J. McCann

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Open to Full-Time Roles – US, EU, LatAm, or Remote

## Professional Summary

Machine Learning researcher and PhD candidate skilled in PyTorch, reinforcement learning, and AI driven optimization. Published author with expertise deploying state-of-the-art models to solve complex problems. Actively expanding knowledge in transformer models and MLOps best practices.

## Technical Skills

- **Machine Learning Frameworks:** PyTorch, TensorFlow, StableBaselines3, Scikit-learn.
- **AI Techniques:** Reinforcement Learning, Deep Learning, CNNs, Bayesian Models.
- **Data Processing:** NumPy, Pandas, Gymnasium.
- **MLOps & Deployment (Currently Studying):** Transformers, MLflow, Docker, AWS.
- **Tools & Infrastructure:** Git, GitHub Actions, Slurm HPC Clusters, JIRA, Linux.

## Professional Experience

**AI Researcher** | *University of Massachusetts Lowell (Remote)* | Sept. 2022 – Present

- Integrated a reinforcement learning module into an open-source optical network simulator, boosting network efficiency by **25%** in dynamic scenarios.
- Optimized hyperparameters via Optuna, significantly improving model convergence and accuracy.
- Managed large-scale experiments using **Slurm HPC clusters** across distributed nodes.
- Published original research at **3 international conferences** (200+ attendees).

**Firmware Validation Engineer Intern** | *Zebra Technologies (Remote)* | Jan. – Aug. 2022

- Designed and deployed automated firmware validation tests in Jenkins, reducing build failures by 150+ occurrences.
- Built Python-based API parser facilitating streamlined Wi-Fi 6 compliance testing.

**Data Scientist Intern** | *Nference (Hybrid)* | Summer 2019 & 2020

- Engineered NLP-focused Python functions utilized by 100+ internal developers, accelerating text analytics workflows significantly.
- Enhanced data handling performance through MongoDB integration, reducing data pipeline latency.

## Education

*University of Massachusetts Lowell*

**Ph.D. in Computer Engineering (part-time):** 3.7 GPA | *Expected Completion: 2028*

- Focused on network design and **applied AI**, guiding 200+ students across 2+ years through hands-on implementation of protocols (TCP, UDP, IP, RDT, OpenFlow) across all 5 network layers, with projects involving HTTP, DNS, and network performance evaluation.

**M.S.E. in Computer Engineering:** 3.7 GPA

- Applied supervised, unsupervised, and reinforcement learning (e.g., CNNs, Q-learning, TD, Bayesian models) in Gymnasium and real-world tasks using PyTorch, TensorFlow, Scikit-learn, and Optuna.

**B.S.E. in Computer Engineering:** 3.9 GPA | *Magna Cum Laude*

- Applied data structures (trees, graphs, hash maps) and statistical methods (hypothesis testing, probabilistic models) to ML workflows using C++, Python, NumPy, and Pandas.