Cameron Reid

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EDUCATION

University of Illinois Chicago
Ph.D. in Computer Science (in progress) 2024 – Present
Advisor: Professor Wenhao Luo

Purdue University, Indianapolis
M.Sc. in Computer Science May 2021
Thesis: Mutual Reinforcement Learning

Purdue University, West Lafayette
B.S. in Computer Science May 2014

RESEARCH INTERESTS

Mobile robotics, end-to-end deep learning control systems, multi-agent reinforcement learning, intelligent systems, machine learning for robotics

PUBLICATIONS

[1] **Mutual Information Tracks Policy Coherence in Reinforcement Learning**
C Reid, W Hafez, A Nazeri
arXiv preprint arXiv:2509.10423, 2025

[2] **Entanglement Learning: an Information-Theoretic Framework for Adaptive Convolutional Neural Networks**
W Hafez, A Nazeri, C Reid, S Eshami
2025 IEEE Conference on Artificial Intelligence (CAI), 2025

[3] **Mutual reinforcement learning with heterogeneous agents**
C Reid, S Mukhopadhyay
2021 IEEE International Conference on Smart Computing (SMARTCOMP), 2021

[4] **Mutual Q-learning**
C Reid, S Mukhopadhyay
2020 3rd International Conference on Control and Robots (ICCR), 2020

[5] **Mutual Reinforcement Learning**
C Reid
Purdue University, 2021

[6] **Student/Teacher Advising through Reward Augmentation**
C Reid
arXiv preprint arXiv:2002.02938, 2020

PROFESSIONAL EXPERIENCE

Jacobian Labs — Founder/Principal Engineer

June 2023 – Present
Founded consulting practice focused on building reliable, robust software systems for clients across diverse industries, specializing in machine learning and scalable architecture.

Klaviyo — Senior Software Engineer

June 2022 – June 2023

Led development of high-throughput data ingestion systems managing large-scale streams from e-commerce integrations, ensuring reliability and efficiency in processing millions of events.

Sense — Senior Software Engineer

February 2021 – June 2022

Guided development of conversational AI assistant using deep learning NLU techniques as part of the chatbot team, delivering Sense's primary AI product to market.

Kerauno — Principal Software Engineer

September 2018 – November 2019

Led engineering team in building next-generation communications workflow platform using modern best practices, including PostgreSQL relational data modeling and Golang microservices orchestrated with Kubernetes.

Torchlite — Senior Platform Engineer

December 2015 – September 2018

Served as founding member of engineering team, architecting and implementing all back-end infrastructure for early-stage startup.

Emerging Threats / Proofpoint — Software Engineer

July 2014 – December 2015

Developed robust big data management solutions for cybersecurity threat detection systems.

TECHNICAL SKILLS

Machine Learning: PyTorch, TensorFlow, Keras, reinforcement learning frameworks

Cloud & Infrastructure: AWS, Azure, GCP, Docker, Kubernetes

Databases: PostgreSQL (expert level), distributed database systems

Programming Languages: Python, JavaScript/TypeScript, Scala, Rust, Ruby, Go, Java

SELECTED PROJECTS

Chatbot V2: Designed and implemented successor to Sense chatbot with improved scalability, maintainability, and stability, enabling confident deployment in demanding enterprise markets.

Mutual Reinforcement Learning: Conducted research into novel multi-agent machine learning algorithms, resulting in multiple peer-reviewed publications.

Kerauno Event Engine: Architected high-throughput, fault-tolerant, distributed event reactor serving as the core of Kerauno's communication orchestration platform.