

# Cameron Reid

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## EDUCATION

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### University of Illinois Chicago

Ph.D. in Computer Science (in progress)  
Advisor: Professor Wenhao Luo

2024 – Present

### Purdue University, Indianapolis

M.Sc. in Computer Science  
Thesis: Mutual Reinforcement Learning

May 2021

### Purdue University, West Lafayette

B.S. in Computer Science

May 2014

## RESEARCH INTERESTS

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

## PUBLICATIONS

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- [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

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### 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**

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

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

**Databases:** PostgreSQL, distributed database systems

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

## **SELECTED PROJECTS**

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**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.