Connor Brennan, PhD

Machine Learning Researcher

CONTACT

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📍 Redwood City, California

EDUCATION

Doctor of Philosophy-Neuroscience
University of Pennsylvania
Philadelphia, Sept 2022

Bachelor of Science-Physics
University of Washington
Seattle, Aug 2016

AWARDS

Google PhD Fellow
2020 - 2022

SKILLS

▪ Training at Scale
▪ High Performance Computing
▪ PyTorch
▪ Reinforcement Learning
▪ Large Language Models
▪ Foundation Models
▪ Environmental Design
▪ Python
▪ Unity 3D
▪ Neurosystems

INTERESTS

Biologically inspired AI,
meta-learning, real-time adaptation,
foundation models, generalization

PROFILE

I possess 8+ years of research experience, with a track record of publishing 8+ papers and managing projects exceeding $2M in funding, including $200k in direct funding. My recent work involves leveraging OLCF supercomputers to train large-scale language and reinforcement learning models on multi-terabyte datasets. I aspire to further this research in developing real-time adaptive agents.

EXPERIENCE

Postdoctoral Researcher

Mila | Quebec | 2022-PRESENT

▪ Managed 10+ person teams in training advanced language and vision models with billions of parameters.
▪ Spearheaded the deployment of large-scale reinforcement learning architectures, enabling agents to adapt to new environments using memory-based techniques.
▪ Collaborated on multi-million dollar grant projects, overseeing the allocation of millions of compute hours to achieve research objectives.
▪ Innovated and implemented parallelizable, high-performance computing solutions for training large models, efficiently utilizing thousands of computing nodes.

PhD Candidate

University of Pennsylvania | Philadelphia | 2016-2022

▪ Pioneered a predictive methodology for forecasting behavioral shifts in individual *C. elegans* organisms, reaching forecast horizons of several seconds.
▪ Designed a versatile toolkit for extracting the dynamics that drives neuronal activity in both biological and artificial networks.
▪ Formulated a precise quantitative model of working memory in human subjects, contributing to our understanding of cognitive processes.

Lab tech

University of Washington | Seattle | 2014-2016

▪ Developed a massively parallel simulator utilizing GPUs to model the MinE/MinD interaction in Escherichia coli, enabling efficient and scalable simulations.
▪ Built machine learning-assisted tools within a software package designed for automated cell segregation, which has garnered over 150 citations.

REFERENCES

Irina Rish - Full Professor at the Université de Montréal. irina.rish@mila.quebec

Alex Proekt - Associate Professor at the University of Pennsylvania. proekt@gmail.com