RYLAN SCHAEFFER

Skills

Languages
Python
R
Go
MATLAB
C/C++

Libraries
PyTorch
NumPy
Pandas
SciPy
HuggingFace
TensorFlow
Jax

DB & Querying
Postgres
Presto
Hive
MySQL
SQLite

OS
Linux
macOS
Windows

Cognitive Neuroscience
DataJoint
SPM
Amazon MTurk
Gorilla

Contact

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Education

Stanford University **Sep 2021 - Present**
PhD, Computer Science

Harvard University **Sep 2019 - Dec 2020**
MS, Computational Science & Engineering (4.0 GPA)
Teaching Assistant: AM207 Bayesian Methods (Graduate), CS181 Machine Learning

University College London **Sep 2017 - Sep 2018**
MRes, Cognitive Neuroscience (Distinction = British 4.0 GPA)

University of California, Davis **Sep 2011 - Jun 2016**
BS, Computer Science Engineering & BS, Computational Statistics
Outstanding Senior Award, Department of Computer Science and Engineering
Designed and taught 3 courses: Cryptocurrency Technologies, History of CS, Davis Hacks

Publications

Schaeffer, Khona, et al. Self-Supervised Learning of Efficient Algebraic Codes Generates Grid Cells. *In Prep. & Under Review @ NeurIPS 2022 Workshops NeurReps, SSL, InfoCog.*

Schaeffer, et al. No Free Lunch from Deep Learning in Neuroscience: A Case Study through Models of the Entorhinal-Hippocampal Circuit. *NeurIPS 2022.*

Schaeffer, et al. Streaming Inference for Infinite Feature Models. *ICML 2022*.

Schaeffer, et al. No Free Lunch from Deep Learning in Neuroscience: A Case Study through Models of the Entorhinal-Hippocampal Circuit. *ICML 2022 Workshop: AI for Science*.

Schaeffer, et al. Streaming Inference for Infinite Non-Stationary Clustering. *Conference on Lifelong Learning Agents (CoLLAs) 2022*.

Schaeffer, et al. Streaming Inference for Infinite Non-Stationary Clustering. *ICLR 2022 Workshop: Agent Learning in Open-Endedness.*

Schaeffer. An Algorithmic Theory of Metacognition in Minds and Machines. *NeurIPS 2021 Workshop: Metacognition in the Age of AI.*

Schaeffer, et al. Efficient Online Inference for Nonparametric Mixture Models. *UAI 2021.*

Schaeffer et al. Neural network model of amygdalar memory engram formation and function. *COSYNE 2021.*

Schaeffer et al. Reverse-engineering Recurrent Neural Network solutions to a hierarchical inference task for mice. *NeurIPS 2020.*

Professional Experience

Stanford University **Sep 2021 - Present**
Graduate Student Researcher (Rotating)
Exploring research directions including pretrained representation distillation, sample-efficient large language models, and improved scene understanding.

Massachusetts Institute of Technology **Jan 2020 - Present**
Senior Research Associate & Graduate Student Researcher
Conducted research in machine learning and computational neuroscience on topics including deep learning, variational inference, Bayesian nonparametrics and reinforcement learning. Published at ICML 2022, CoLLAs 2022, UAI 2021, NeurIPS 2020 and workshops.

Google DeepMind **May 2021 - Jul 2021**
Research Engineer Intern
Trained hierarchical reinforcement learning agents on AndroidEnv using Acme, XManager, etc.

Uber **Oct 2018 - Sep 2019**
Data Scientist, Intelligent Decision Systems
Placed 3rd out of 217 teams in Uber's multi-week Machine Learning Hackathon.