# 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

+1 (650) 450-3013
rylanschaeffer@gmail.com
linkedin.com/in/rylanschaeffer
rylanschaeffer.github.io

## Education

| | |
|---|---|
| **Stanford University** | **Sep 2021 - Present** |

Computer Science PhD (4.0 GPA)
CS 25 Transformers Course Co-Instructor

| | |
|---|---|
| **Harvard University** | **Sep 2019 - Dec 2020** |

Computational Science & Engineering MS (4.0 GPA)

| | |
|---|---|
| **University College London** | **Sep 2017 - Sep 2018** |

Cognitive Neuroscience MRes (Distinction = British 4.0 GPA)

| | |
|---|---|
| **University of California, Davis** | **Sep 2011 - Jun 2016** |

Computer Science Engineering BS & Computational Statistics BS
Outstanding Senior Award, Department of Computer Science and Engineering

## Publications

*Schaeffer*, et al. Are Emergent Abilities of Large Language Models a Mirage? **Under Review @ NeurIPS 2023.**

*Schaeffer\*, Khona\**, et al. Self-Supervised Learning of Representations for Space Generates Multi-Modular Grid Cells. **Under Review @ NeurIPS 2023.**

*Schaeffer*, et al. Double Descent Demystified: Identifying, Interpreting & Ablating the Sources of a Deep Learning Puzzle. **Under Review @ NeurIPS 2023.**

Bricken, *Schaeffer*, et al. Emergence of Sparse Representations from Noise. **ICML 2023.**

*Schaeffer*, et al. Invalid Logic, Equivalent Gains: The Bizarreness of Reasoning in Language Model Prompting. **ICML 2023 Workshop: Knowledge & Logical Reasoning.**

*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. Streaming Inference for Infinite Non-Stationary Clustering. **CoLLAs 2022.**

*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 (Professor Sanmi Koyejo)

| | |
|---|---|
| **Meta GenAI** | **June 2023 - Present** |

Research Science Intern, Large Language Models Team

| | |
|---|---|
| **Massachusetts Institute of Technology** | **Jan 2020 - Present** |

Senior Research Associate & Graduate Student Researcher (Professor Ila Fiete)

| | |
|---|---|
| **Google DeepMind** | **May 2021 - Jul 2021** |

Research Engineer Intern, Hierarchical Reinforcement Learning Team

| | |
|---|---|
| **Uber** | **Oct 2018 - Sep 2019** |

Data Scientist, Time Series Forecasting and Anomaly Detection Platform
Placed 3rd out of 217 teams in Uber's multi-week Machine Learning Hackathon. Increased accuracy of Uber's anomaly detection platform from 67% to 81%. Guided budget planning and efficiency efforts for Uber's data, storage and compute platforms using forecasting.