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## Skills

### Languages

Python  
R  
Go  
MATLAB  
C/C++

### Libraries

PyTorch  
NumPy  
Pandas  
SciPy  
TensorFlow  
Jax  
Neural Tangents

### DB & Querying

Presto  
Hive  
MySQL  
Postgres  
SQLite

### OS

Linux  
macOS  
Windows

### Neuroscience

DataJoint  
SPM  
Amazon MTurk  
Gorilla

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## Contact

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## Education

### Stanford University

Doctor of Philosophy, Computer Science

Sep 2021 - Present

### Harvard University

Master of Science, Computational Science & Engineering (4.0 GPA)

Teaching Assistant: AM207 Bayesian Methods, CS181 Machine Learning, CS109a Data Science

Sep 2019 - Dec 2020

### University College London

Master of Research, Cognitive Neuroscience (Distinction = British 4.0 GPA)

Sep 2017 - Sep 2018

### University of California, Davis

Bachelor of Science, Computer Science Engineering

Bachelor of Science, Computational Statistics

Outstanding Senior Award, Department of Computer Science and Engineering

Designed and taught 3 courses: Cryptocurrency Technologies, History of CS, Davis Hacks

Sep 2011 - Jun 2016

## Publications

Rylan Schaeffer, Blake Bordelon, Mikail Khona, Weiwei Pan and Ila Rani Fiete. Efficient Online Inference for Nonparametric Mixture Models. UAI 2021.

Rylan Schaeffer, Mikail Khona, Leenoy Meshulam, IBL, Ila Rani Fiete. Reverse-engineering Recurrent Neural Network solutions to a hierarchical inference task for mice. NeurIPS 2020.

Rylan Schaeffer, Nimrod Shaham, Gabriel Kreiman, Haim Sompolinsky. Neural network model of amygdalar memory engram formation and function. COSYNE 2021.

Rylan Schaeffer, [...], Ila Rani Fiete, International Brain Laboratory. Neural population dynamics for hierarchical inference in mice performing the International Brain Lab task. SfN (2021).

Rylan Schaeffer, International Brain Laboratory, Ila Rani Fiete. Brain-wide population codes for hierarchical inference in mice. In preparation (2021).

Rylan Schaeffer, Mikail Khona, Ila Rani Fiete. Dynamical Chinese Restaurant Process. In preparation (2021).

Rylan Schaeffer, Mikail Khona, Ila Rani Fiete. Efficient Streaming Inference for Infinite Feature Models. In preparation (2021).

## Experience

### Massachusetts Institute of Technology

Graduate Student Researcher

Fiete Lab: Characterized how recurrent neural networks perform hierarchical inference using PyTorch (NeurIPS). Proposed efficient online inference algorithms for mixture models (UAI).

Dec 2019 - Sep 2021

### Google DeepMind

Research Engineer Intern

Trained hierarchical RL agents on AndroidEnv platform using Acme and Launchpad.

May 2021 - Jul 2021

### Harvard University

Graduate Student Researcher

Sompolinsky Lab: Modeled memory engram formation and function during associative using bespoke rate-based neural network and Bayesian nonparametric model (distance-dependent Chinese Restaurant Process) (Cosyne 2021).

Pehlevan Lab: Researched distributional reinforcement learning to explain why distributional learning causes agents to learn faster and perform better asymptotically.

Sep 2019 - Dec 2020

### Uber

Data Scientist

Placed 3rd out of 217 teams in Uber's Machine Learning Hackathon. Increased accuracy of Uber's anomaly detection platform in Go from 67% to 81% (precision 0.957 to 0.917; recall 0.247 to 0.618). Guided long-range budget planning and future efficiency efforts for Uber's data, storage and compute platforms using statistical forecasting models. Enabled model routing for anomaly detection by refactoring Metric Reliability Service.

Oct 2018 - Sep 2019