# **SCOTT EMMONS**

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## **EDUCATION**

## University of California, Berkeley

PhD in Artificial Intelligence, *Department of Electrical Engineering and Computer Sciences*. 2019 - Present Advised by Stuart Russell.

# University of North Carolina at Chapel Hill

BS, *Mathematics* and BA, *Computer Science*. Highest Honors for Thesis in Mathematics.

2015 - 2019

# **AWARDS AND HONORS**

#### Department of Energy Computational Science Graduate Fellowship (\$300,000)

2019 - 2023

- Supports 4 years of graduate study for 20 U.S. students per year researching high-performance computing. **Robertson Scholars Leadership Program (\$250,000)**2015 2019
  - Highly selective undergraduate merit scholarship providing dual citizenship at UNC and Duke.

#### Goldwater Scholar (\$15,000)

2017 - 2019

- Awarded to 300 students in the U.S. per year for natural sciences, mathematics, and engineering research.
  Archibald Henderson Medal
  - A gold medal, UNC's top undergraduate mathematics prize, given to 1 student per year.

## RESEARCH PREPRINTS

- 15. Leon Lang, Davis Foote, Stuart Russell, Anca Dragan, Erik Jenner, & **Scott Emmons**: "When Your AI Deceives You: Challenges with Partial Observability of Human Evaluators in Reward Learning." *arXiv*, 2024.
- 14. Alexandra Souly\*, Qingyuan Lu\*, Dillon Bowen\*, Tu Trinh†, Elvis Hsieh†, Sana Pandey, Pieter Abbeel, Justin Svegliato, **Scott Emmons**, Olivia Watkins, & Sam Toyer: "A StrongREJECT for Empty Jailbreaks." *arXiv*, 2024.
- 13. Edmund Mills, Shiye Su, Stuart Russell, & **Scott Emmons**: "ALMANACS: A Simulatability Benchmark for Language Model Explainability." *arXiv*, 2023.
- 12. Luke Bailey\*, Euan Ong\*, Stuart Russell, & **Scott Emmons**: "Image Hijacks: Adversarial Images can Control Generative Models at Runtime." *arXiv*, 2023.

## RESEARCH PUBLICATIONS

- 11. Alexander Pan\*, Chan Jun Shern\*, Andy Zou\*, Nathaniel Li, Steven Basart, Thomas Woodside, Jonathan Ng, Hanlin Zhang, **Scott Emmons**, & Dan Hendrycks: "Do the Rewards Justify the Means? Measuring Trade-Offs Between Rewards and Ethical Behavior in the MACHIAVELLI Benchmark." *International Conference on Machine Learning (ICML)*, 2023.
- 10. **Scott Emmons**, Caspar Oesterheld, Andrew Critch, Vince Conitzer, & Stuart Russell: "For Learning in Symmetric Teams, Local Optima are Global Nash Equilibria." *International Conference on Machine Learning (ICML)*, 2022.
- 9. **Scott Emmons**, Benjamin Eysenbach, Ilya Kostrikov, & Sergey Levine: "RvS: What is Essential for Offline RL via Supervised Learning?" *International Conference on Learning Representations (ICLR)*, 2022.
- 8. Xin Chen\*, Sam Toyer\*, Cody Wild\*, **Scott Emmons**, Ian Fischer, Kuang-Huei Lee, Neel Alex, Steven H. Wang, Ping Luo, Stuart Russell, Pieter Abbeel, & Rohin Shah: "An Empirical Investigation of Representation Learning for Imitation." *Neural Information Processing Systems (NeurIPS)*, 2021.
- 7. **Scott Emmons**\*, Ajay Jain\*, Michael Laskin\*, Thanard Kurutach, Pieter Abbeel, & Deepak Pathak: "Sparse Graphical Memory for Robust Planning." *Neural Information Processing Systems (NeurIPS)*, 2020.
- 6. Eun Lee, **Scott Emmons**, Ryan Gibson, James Moody, & Peter J. Mucha: "Concurrency and Reachability in Treelike Temporal Networks." *Physical Review E, 2019*.
- 5. **Scott Emmons** & Peter J. Mucha: "A Map Equation with Metadata: Varying the Role of Attributes in Community Detection." *Physical Review E*, 2019.

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4. Kris Hauser & Scott Emmons: "Global Redundancy Resolution via Continuous Pseudoinversion of the Forward Kinematic Map." IEEE Transactions on Automation Science and Engineering, 2018.

- 3. Scott Emmons, Robert Light, & Katy Börner: "MOOC Visual Analytics: Empowering Students, Teachers, Researchers, and Platform Developers of Massively Open Online Courses." Journal of the Association for Information Science and Technology (JASIST), 2017.
- 2. William H. Weir, Scott Emmons, Ryan Gibson, Dane Taylor, & Peter J. Mucha: "Post-Processing Partitions to Identify Domains of Modularity Optimization." Algorithms, 2017.
- 1. Scott Emmons, Mike Gallant, Stephen Kobourov, & Katy Börner: "Analysis of Network Clustering Algorithms and Cluster Quality Metrics at Scale." PLoS ONE, 2016.

#### **OPEN-SOURCE SOFTWARE**

Adam Gleave, Mohammad Taufeeque, Juan Rocamonde, Erik Jenner, Steven H. Wang, Sam Toyer, Maximilian Ernestus, Nora Belrose, Scott Emmons, & Stuart Russell: "imitation: Clean Imitation Learning Implementations." arXiv, 2022.

#### **LEADERSHIP**

# **Center for Human-Compatible AI (CHAI)**

Berkeley, CA

PhD Student

August 2019 - Present Co-managing CHAI's million-dollar compute budget by purchasing, installing, and maintaining an AI research cluster with 8 nodes, 64 GPUs, and 40 unique users.

Co-managing CHAI's internship program, scaling it from 7 interns per year to 25 interns per year.

#### far.ai

Berkeley, CA

Cofounder and President

February 2022 - July 2023

- Built FAR AI, Inc., a 501(c)(3) nonprofit that incubates and scales beneficial AI research agendas.
- Fundraised, recruited, and managed researchers to help define and execute on FAR's mission.

#### **SERVICE**

## Shanti Bhavan Children's Project

Tamil Nadu, India

Volunteer Teacher

July 2017 - August 2017

Taught approximately 80 primary and secondary school students from families who make less than \$2 / day in subjects ranging from English literature to physics in preparation for employment and higher education.

## **Sunflower County Freedom Project**

Sunflower, MS

Volunteer Teacher

May 2016 - July 2016

Developed standard-aligned  $8^{th}$ - and  $9^{th}$ -grade math curriculum and taught it to two math classes that saw an average increase in performance of 9% on state standard test.