Neel Guha

Contact

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Education

2021–	PhD in Computer Science, Stanford University Advisor: Christopher Ré
2020–	JD, Stanford Law School
2018–2019	MS in Machine Learning, Carnegie Mellon University Advisor: Virginia Smith
2014–2018	BS with Honors in Computer Science, Stanford University Thesis: *Aggregating Model Spaces*

Experience

2021–	PhD Student, HazyResearch Lab
2019–	Graduate Student Fellow at Stanford RegLab
2019–2020	Visiting Student at HazyResearch Lab (Stanford Computer Science)
2018–2020	Research Assistant at Magic Lab (Stanford Mechanical Engineering)
2018–2020	Research Assistant at School of Computer Science (Carnegie Mellon)
Summer 2017	Software Engineering Intern at Laserlike
Spring 2017	Policy Intern, Federal Communications Commission
Summer 2016	Software Engineering Intern at Google
Summer 2015	Research Assistant, Institute for Quantitative Social Science (Harvard)

Works-in-progress/preprints

Information in AI Governance
Selected for the *Fourth Annual Legal Scholars Roundtable on Artificial Intelligence at Emory (2025)*
Neel Guha

Cartridges: Lightweight and general-purpose long context representations via self-study
Sabri Eyuboglu*, Ryan Ehrlich*, Simran Arora*, Neel Guha, Dylan Zinsley, Emily Liu, Will Tennien, Atri Rudra, James Zou, Azalia Mirhoseini, Christopher Ré

Legal publications

The State Statutes Project
2024 Wis. L. Rev. 1615
Neel Guha and Diego Zambrano

AI Regulation Has Its Own Alignment Problem: The Technical and Institutional Feasibility of Disclosure, Registration, Licensing, and Auditing
92 George Washington Law Review 1473 (2024)
Neel Guha*, Christie M. Lawrence*, Lindsey A. Gailmard, Kit T. Rodolfa, Faiz Surani, Rishi Bommasani, Inioluwa

Deborah Raji, Mariano-Florentino Cuéllar, Colleen Honigsberg, Percy Liang, and Daniel E. Ho

Understanding Liability Risk from Using Health Care Artificial Intelligence Tools
New England Journal of Medicine (2024)
Michelle M. Mello and Neel Guha

Private Enforcement in the States
172 University of Pennsylvania Law Review 61 (2023)
Diego Zambrano, Neel Guha, Austin Peters, and Jeffrey Xia

ChatGPT and Physicians' Malpractice Risk
JAMA Health Forum (2023)
Michelle M. Mello and Neel Guha

Vulnerabilities in Discovery Tech
35 Harvard Journal of Law & Technology 281 (2022)
Neel Guha, Peter Henderson, and Diego Zambrano

Computer science publications

An Architecture Search Framework for Inference-Time Techniques
International Conference on Machine Learning (2025)
Jon Saad-Falcon, Adrian Gamarra Lafuente, Shlok Natarajan, Nahum Maru, Hristo Todorov, Etash Guha, E. Kelly Buchanan, Mayee Chen, Neel Guha, Christopher Ré, Azalia Mirhoseini

Open Problems in Technical AI Governance
Transactions on Machine Learning Research (2025)
Anka Reuel*, Ben Bucknall*, Stephen Casper, Tim Fist, Lisa Soder, Onni Aarne, Lewis Hammond, Lujain Ibrahim, Alan Chan, Peter Wills, Markus Anderljung, Ben Garfinkel, Lennart Heim, Andrew Trask, Gabriel Mukobi, Rylan Schaeffer, Mauricio Baker, Sara Hooker, Irene Solaiman, Alexandra Sasha Luccioni, Nitarshan Rajkumar, Nicolas Moës, Jeffrey Ladish, Neel Guha, Jessica Newman, Yoshua Bengio, Tobin South, Alex Pentland, Sanmi Koyejo, Mykel J. Kochenderfer, Robert Trager

A Reasoning-Focused Legal Retrieval Benchmark
4th ACM Symposium on Computer Science and Law (2025)
Lucia Zheng*, Neel Guha*, Javokhir Arifov, Sarah R Zhang, Michal Skreta, Christopher D Manning, Peter Henderson, Daniel E. Ho

Smoothie: Label Free Language Model Routing
Conference on Neural Information Processing Systems (2024)
Neel Guha*, Mayee F. Chen*, Trevor Chow, Ishan S. Khare, Christopher Ré

Stronger Than You Think: Benchmarking Weak Supervision on Realistic Tasks
Conference on Neural Information Processing Systems, Datasets and Benchmarks Track (2024)
Also appeared in: *Workshop on Data-Centric Machine Learning Research at ICML* (2024)
Tianyi Zhang, Linrong Cai, Jeffrey Li, Nicholas Roberts, Neel Guha, Frederic Sala

Benchmarking and Building Long-Context Retrieval Models with LoCo and M2-BERT
International Conference on Machine Learning (2024)
Also appeared in: *Workshop on Mathematical and Empirical Understanding of Foundation Models at ICLR (2024)*
Jon Saad-Falcon, Daniel Y. Fu, Simran Arora, Neel Guha, Christopher Ré

Prospector Heads: Generalized Feature Attribution for Large Models & Data
International Conference on Machine Learning (2024)
Gautam Machiraju*, Alexander Derry*, Arjun Desai, Neel Guha, Amir-Hossein Karimi, James Zou, Russ Altman,

Christopher Ré, Parag Mallick

LegalBench: A Collaboratively Built Benchmark for Measuring Legal Reasoning in Large Language Models
Conference on Neural Information Processing Systems, Datasets and Benchmarks Track (2023)
Neel Guha*, Julian Nyarko*, Daniel E. Ho*, Christopher Ré*, Adam Chilton, Aditya Narayana, Alex Chohlas-Wood, Austin Peters, Brandon Waldon, Daniel N. Rockmore, and Diego Zambrano, Dmitry Talisman, Enam Hoque, Faiz Surani, Frank Fagan, Galit Sarfaty, Gregory M. Dickinson, Haggai Porat, Jason Hegland, Jessica Wu, Joe Nudell, Joel Niklaus, John Nay, Jonathan H. Choi, Kevin Tobia, Margaret Hagan, Megan Ma, Michael Livermore, Nikon Rasumov Rahe, Nils Holzenberger, Noam Kolt, Peter Henderson, Sean Rehaag, Sharad Goel, Shang Gao, Spencer Williams, Sunny Gandhi, Tom Zur, Varun Iyer, and Zehua Li

Embroid: Unsupervised Prediction Smoothing Can Improve Few-Shot Classification
Conference on Neural Information Processing Systems (2023)
Neel Guha*, Mayee F. Chen*, Kush Bhatia*, Azalia Mirhoseini, Frederic Sala, and Christopher Ré

Don't Use a Cannon to Kill a Fly: An Efficient Cascading Pipeline for Long Documents
International Conference on AI and Law (2023)
Zehua Li, Neel Guha, and Julian Nyarko

Holistic Evaluation of Language Models
Transactions on Machine Learning Research (2023)
Percy Liang*, Rishi Bommasani*, Tony Lee*, Dimitris Tsipras, Dilara Soylu, Michihiro Yasunaga, Yian Zhang, Deepak Narayanan, Yuhuai Wu, Ananya Kumar, and Benjamin Newman, Binhang Yuan, Bobby Yan, Ce Zhang, Christian Alexander Cosgrove, Christopher D Manning, Christopher Re, Diana AcostaNavas, Drew Arad Hudson, Eric Zelikman, Esin Durmus, Faisal Ladhak, Frieda Rong, Hongyu Ren, Huaxiu Yao, Jue WANG, Keshav Santhanam, Laurel Orr, Lucia Zheng, Mert Yuksekgonul, Mirac Suzgun, Nathan Kim, Neel Guha, Niladri S. Chatterji, Omar Khattab, Peter Henderson, Qian Huang, Ryan Andrew Chi, Sang Michael Xie, Shibani Santurkar, Surya Ganguli, Tatsunori Hashimoto, Thomas Icard, Tianyi Zhang, Vishrav Chaudhary, William Wang, Xuechen Li, Yifan Mai, Yuhui Zhang, and Yuta Koreeda

Ask Me Anything: A Simple Strategy for Prompting Language Models
International Conference on Learning Representations (2023) **(Spotlight)**
Simran Arora*, Avanika Narayan*, Mayee F Chen, Laurel J Orr, Neel Guha, Kush Bhatia, Ines Chami, Frederic Sala, and Christopher Ré

Pile of Law: Learning Responsible Data Filtering from the Law and a 256GB Open Source Legal Dataset
Conference on Neural Information Processing Systems, Datasets and Benchmarks Track (2022) **(Oral Presentation)**
Peter Henderson*, Mark S. Krass*, Lucia Zheng, Neel Guha, Christopher D. Manning, Dan Jurafsky, Daniel E. Ho

When Does Pretraining Help? Assessing Self-Supervised Learning for Law and the CaseHOLD Dataset
International Conference on AI and Law (2021) **(Carole Hafner Best Paper Award)**
Lucia Zheng*, Neel Guha*, Brandon R. Anderson, Peter Henderson, Daniel E. Ho

Bootleg: Chasing the Tail with Self-Supervised Named Entity Disambiguation
Conference on Innovative Data Systems Research (2021)
Laurel Orr*, Megan Leszczynski*, Simran Arora, Sen Wu, Neel Guha, Xiao Ling, Christopher Ré

Leveraging Administrative Data for Bias Audits: Assessing Disparate Coverage with Mobility Data for COVID-19 Policy
ACM Conference on Fairness, Accountability, and Transparency (2020)
Amanda Coston, Neel Guha, Lisa Lu, Derek Ouyang, Alexandra Chouldechova, and Daniel E. Ho

Machine Learning for AC Optimal Power Flow
Climate Change Workshop at the International Conference on Machine Learning (2019) **(Honorable Mention for Best Paper)**
Neel Guha, Zhecheng Wang, Matt Wytock, and Arun Majumdar

One-Shot Federated Learning
2nd Workshop on Machine Learning on the Phone and other Consumer Devices at Neural Information Processing Systems (2018) **(Oral Presentation)**
Neel Guha, Ameet Talwalkar, and Virginia Smith

White papers

HAI Policy Brief: Understanding Liability Risk from Healthcare AI (2024)
Michelle M. Mello and Neel Guha

HAI Policy Brief: The AI Regulatory Alignment Problem (2023)
Neel Guha*, Christie M. Lawrence*, Lindsey A. Gailmard, Kit T. Rodolfa, Faiz Surani, Rishi Bommasani, Inioluwa Deborah Raji, Mariano-Florentino Cuéllar, Colleen Honigsberg, Percy Liang, and Daniel E. Ho

Building a National AI Research Resource: A Blueprint for the National Research Cloud (2021)
Contributing Author: §5 (Data Privacy Compliance), §6 (Technical Privacy and Virtual Data Safe Rooms), §8 (Managing Cybersecurity Risks).

On the Opportunities and Risks of Foundation Models (2021)
Contributing Author: §3.2 (Legal Applications) and §5.4 (Legality)

ResX Task Force Final Report: Our Vision for Stanfords Undergraduate Residences (2018)
ResX Task Force

Book chapters

Building GenAI Benchmarks: A Case Study in Legal Applications
In *The Oxford Handbook on the Foundations and Regulation of Generative AI* (Oxford University Press, forthcoming 2025)
Neel Guha, Julian Nyarko, Daniel E. Ho, and Christopher Ré

Gamesmanship in Modern Discovery Tech
In *Legal Tech and the Future of Civil Justice* (Cambridge University Press, 2023)
Diego Zambrano, Neel Guha, and Peter Henderson

Academic honors

2023	Stanford Interdisciplinary Graduate Fellowship
2023	Stanford HAI Graduate Fellowship
2021	Finalist, Paul & Daisy Soros Fellowship for New Americans
2021	Carole Hafner Best Paper Award, 2021 International Conference on Artificial Intelligence and Law
2021	Gerald Gunther Prize for Outstanding Performance in Health Law
2021	John Hart Ely Prize Prize for Outstanding Performance in a Policy Lab ("Creating a National Research Cloud")
2020	Finalist, Knight Hennessy Fellowship
2019	Best Paper Honorable Mention, Climate Change Workshop at ICML 2019

Presentations

3/2025	*The State Statutes Project*, Symposium on Legal Interpretation and Data, Georgetown University Law Center, Washington, DC.
1/2025	*AI in Action: New and Emerging Research, Programs, and Policies* (Panel), Access to Justice and AI: New Frontiers for Research, Policy, and Practice, Beus Center for Law and Society (Arizona State University), Phoenix, AZ.
1/2025	*Information in AI Regulation*, Emerging Scholars in Law & Economics, AALS Annual Meeting, San Francisco, CA.
12/2024	*AI Evaluation and Governance*, Object Management Group AI Task Force, San Francisco, CA.
11/2024	*Benchmarks for Legal RAG*, Max Planck Institute (Virtual).
10/2024	*Synthetic Data*, Stanford Law School AI + Access to Justice Summit, Stanford, CA.
6/2024	*Large Language Models for Law*, Summer Institute in Computational Social Science (hosted by Faculty of Law and Administration of Adam Mickiewicz University), Virtual.
5/2024	*The State Statutes Project*, Public Law in the States Conference at the University of Wisconsin, Madison, WI.
1/2024	*Private Enforcement in the States*, Law & Geopolitics Colloquium at the University of California Berkeley Law School, Berkeley, CA. Co-presented with Prof. Diego Zambrano.
1/2024	*Understanding Liability Risk from Healthcare AI Tools*, Stanford Human Centered AI Seminar, Stanford, CA. Co-presented with Prof. Michelle Mello.
1/2024	*LegalBench*, Guest Lecture in LAW 806Y: Justice By Design, Stanford, CA.
11/2023	*LegalBench*, Google, Mountain View, CA.
11/2023	*Private Enforcement in the States*, Faculty Colloquium at University of Washington School of Law, Seattle, WA. Co-presented with Prof. Diego Zambrano.
11/2023	*The Risks, Rewards, and Ethics of Using Artificial Intelligence*, Annual Bench Bar Conference, Bar Association of San Francisco, San Francisco, CA.
10/2023	*Private Enforcement in the States*, Conference on Empirical Legal Studies, Chicago, IL. Co-presented with Prof. Diego Zambrano and Austin Peters.
10/2023	*Private Enforcement in the States*, Public Law Workshop, University of Minnesota Law School. Co-presented with Prof. Diego Zambrano.
8/2023	*Understanding Liability Risk from Health Care AI Tools*, Anesthesia Grand Rounds, Department of Anesthesiology, Perioperative and Pain Medicine, Stanford University School of Medicine, Stanford, CA. Co-presented with Prof. Michelle Mello.
7/2023	*Large Language Models for Civil Justice*, AI & Legal Help Crossover, Stanford Law School Legal Design Lab (Virtual).
6/2023	*LegalBench*, LLM x Law Hackathon, New York, NY.
5/2023	*Private Enforcement in the States*, Civil Procedure Workshop (Northwestern), Chicago, IL. Co-presented with Prof. Diego Zambrano, Austin Peters, and Jeffrey Xia.
4/2023	*LegalBench*, CodeX FutureLaw 2023, Stanford Law School, Stanford, CA.
6/2020	*Update on Previous Work: Machine Learning for AC Optimal Power Flow*, Climate Change Workshop, International Conference on Learning Representations (Virtual).

6/2019	*Machine Learning for AC Optimal Power Flow*, Climate Change Workshop, International Conference on Learning Representations, Long Beach, CA.
12/2018	*One-shot Federated Learning*, 2nd Workshop on Machine Learning on the Phone and other Consumer Devices at Neural Information Processing Systems, Montreal, Canada.

Teaching

Fall 2024	Teaching Asst., CS 103 (Mathematical Foundations of Computing), Stanford
Summer 2024	Teaching Asst., CS 103 (Mathematical Foundations of Computing), Stanford

Other teaching

6/2023	Aided in preparation of session on artificial intelligence for DC Circuit Judicial Conference meeting with Prof. Daniel E. Ho.

Editorial service

Referee/program committee member for:

Adaptive and Multitask Learning Workshop (ICML 2019)
AI + Humanitarian Assistance and Disaster Response Workshop (NeurIPS 2020)
Climate Change Workshop (NeurIPS 2019, NeurIPS 2020, ICML 2021)
Foundation Models for Decision Making Workshop (NeurIPS 2022)
International Conference on AI and Law (2023)
International Conference on Learning Representations (2024)
Journal of Empirical Legal Studies
Knowledge Representation & Reasoning Meets Machine Learning Workshop (NeurIPS 2019)
National Legal Language Processing Workshop (EMNLP 2022)
NeurIPS Datasets & Benchmarks Track (2021, 2022, 2023)
NeurIPS (2024)
Socially Responsible Language Modeling Research (NeurIPS 2023).

Discussant for:

Conference on Empirical Legal Studies (2023)

Committee/leadership service

2022	Senior Articles Editor, *Stanford Law Review* (Volume 75)
2021	Member Editor, *Stanford Law Review* (Volume 74)
2018	ResX, Provostial Task Force, Stanford University
2017-18	Committee on Residental Learning, Stanford University

Coverage

Google's AI Will Help Decide Whether Unemployed Workers Get Benefits, Gizmodo (September, 2024)

Malpractice Claims Involving AI Tools Are Emerging: EDs Can Mitigate Legal Exposure, Emergency Department Management (April, 2024)

Who's at Fault when AI Fails in Health Care? Stanford HAI (March 14, 2024)

Who Pays When AI Goes Rogue? Politico (February 7, 2024)

Research Explores Liability Risk of Using AI Tools in Patient Care, Stanford Medicine Scope (January 25, 2024)

Artificial Intelligence and the Law, The Stanford Lawyer (December 5, 2023)

GPT-4 Wins Chatbot Lawyer Contest But is Still Not as Good as Humans, NewScientist (September 5, 2023)

Private Enforcement in the States, by Prof. Diego Zambrano (Stanford) et al., The Volokh Conspiracy (March 27, 2023).

A 'Messy' Tangle of Private Right Enforcement In State Law, Law360 (March 2, 2023).

Federal Use of AI Tools Prompts Researchers to Build New Dataset, Bloomberg Law (October 3, 2022).

Borrowing from the Law to Filter Training Data for Foundation Models, Stanford HAI (August 10, 2022).

The Datasets We're Looking At This Week, FiveThirtyEight (July 13, 2022).

And Justice For All: Improving Access Through Digital Tools, Innovative Design, The Stanford Lawyer (June 28, 2021).

Smartphone Location Data Can Leave Out Those Most Hit by Covid-19, The Wall Street Journal (April 5, 2021).

Last updated: June 9, 2025