

**Education**

New York University, PhD in Data Science Sep 2020 - present

Advisor: *Andrew Gordon Wilson*

- Center for Data Science Fellowship, 2020-2025

New York University, MS in Computer Science Sep 2017 - May 2019

Advisor: *Joan Bruna*

- Masters Thesis Fellowship, Courant Institute, 2018

IIT Hyderabad, B.Tech in Computer Science Aug 2012 - May 2016

- TODAI Scholarship, University of Tokyo, 2013
- Academic Excellence Award, 2012

Publications

S. Kapoor and collaborators. Uncertainty-Tuning: Teaching Large Language Models to Know What They Don't Know, 2023b. *In Submission*

S. Kapoor and collaborators. Should We Learn Most Likely Functions or Parameters?, 2023a. *In Submission*

T. R. Rudner, **S. Kapoor**, S. Qiu, and A. G. Wilson. Function-Space Regularization in Neural Networks: A Probabilistic Perspective. In *Proceedings of the International Conference on Machine Learning*, 2023

S. Lotfi*, M. Finzi*, **S. Kapoor***, A. Potapczynski*, M. Goldblum, and A. G. Wilson. PAC-Bayes Compression Bounds So Tight That They Can Explain Generalization. In *Advances in Neural Information Processing Systems*, 2022

R. Shwartz-Ziv*, M. Goldblum*, H. Souri, **S. Kapoor**, C. Zhu, Y. LeCun, and A. G. Wilson. Pre-Train Your Loss: Easy Bayesian Transfer Learning with Informative Priors. In *Advances in Neural Information Processing Systems*, 2022

S. Kapoor*, W. Maddox*, P. Izmailov*, and A. G. Wilson. On Uncertainty, Tempering, and Data Augmentation in Bayesian Classification. In *Advances in Neural Information Processing Systems*, 2022

W. J. Maddox, **S. Kapoor**, and A. G. Wilson. When are Iterative Gaussian Processes Reliably Accurate? In *Beyond First Order Methods in ML Systems ICML Workshop*, 2021

S. Kapoor and Valerio Perrone. A Simple and Fast Baseline for Tuning Large XGBoost Models, 2021. *Technical report*

N. Gruver, **S. Kapoor**, M. Cranmer, and A. G. Wilson. Epistemic Uncertainty in Learning Chaotic Dynamical Systems. In *Uncertainty & Robustness in Deep Learning ICML Workshop*, 2021

S. Kapoor, M. Finzi, A. Wang, and A. G. Wilson. SKIing on Simplices: Kernel Interpolation on the Permutohedral Lattice for Scalable Gaussian Processes. In *Proceedings of the International Conference on Machine Learning*, 2021a. **(Oral, Top 3%)**

S. Kapoor, T. Karaletsos, and T. D. Bui. Variational Auto-Regressive Gaussian Processes for Continual Learning. In *Proceedings of the International Conference on Machine Learning*, 2021b

T. Moskovitz, R. Wang, J. Lan, **S. Kapoor**, T. Miconi, J. Yosinski, and A. Rawal. First-Order Preconditioning via Hypergradient Descent. In *Beyond First Order Methods in ML NeurIPS Workshop*, 2019

S. Kapoor. Leveraging Communication for Efficient Sampling, 2019. *Masters thesis*
C. Resnick*, R. Raileanu*, **S. Kapoor**, A. Peysakhovich, K. Cho, and J. Bruna. Back-play: “Man muss immer umkehren”. In *AAAI Workshop on Reinforcement Learning in Games*, 2019

S. Kapoor. Multi-Agent Reinforcement Learning: A Report on Challenges and Approaches, 2018. *Technical report*

Industry Experience	Netflix , Research Intern, USA	Jun 2022 - Aug 2022
	<ul style="list-style-type: none">• Research in probabilistic recommender systems.	
	Amazon , Applied Science Intern, Germany	Jul 2021 - Sep 2021
	<ul style="list-style-type: none">• Research in multi-fidelity Bayesian optimization.	
	Uber , AI Resident, USA	Aug 2019 - Jul 2020
	<ul style="list-style-type: none">• < 1% acceptance rate; research in approximate Bayesian inference.	
Technical Skills	Google , Software Engineering Intern, USA	May 2018 - Aug 2018
	<ul style="list-style-type: none">• Natural language code search on Kubeflow at KubeCon North America 2018.	
	Headout , Software Engineer, India	Dec 2016 - Jul 2017
	<ul style="list-style-type: none">• Led internal developer tooling; slashed deployment/rollback downtime by 99%.	
Honors & Awards	StoryXpress , Co-Founder, India	May 2013 - Aug 2016
	<ul style="list-style-type: none">• Designed the in-house OpenGL video engine for creation at scale.	
	Languages: Python, Node, Javascript, C, C++, Java	
	Technologies: PyTorch, JAX, TensorFlow, Pyro PPL, CUDA, MySQL, React, Docker, Ansible, OpenGL	
	StackOverflow Top Contributor: Reputation 6.5k (top 6% overall as of Sep 2023); answers reached ~2.4 million people, 2021	
	NASSCOM Emerge 50: <i>StoryXpress</i> among top startups from 500+ across India for innovation impact, 2015	
	HYSEA Best Software Product, Student Innovation: <i>StoryXpress</i> winner among 100+ startups, 2015	
Teaching Experience	Microsoft Build the Shield: First Runner up among 280 teams across India, 2015	
	ACM ICPC Amritapuri Regionals: Finalist among 1500+ teams, 2013	
	Joint Entrance Exam (JEE): Top 0.1% among 0.5 million students across India for undergraduate admissions, 2012	
	Teaching Assistant , <i>Introduction to Machine Learning</i> , NYU	Spring 2021
	Head Grader , <i>Machine Learning</i> , NYU	Spring 2019
	Teaching Assistant , <i>Introduction to Machine Learning</i> , NYU	Spring 2019
Section Leader , <i>Inference and Representation</i> , NYU	Fall 2018	
Grader , <i>Introduction to Machine Learning</i> , NYU	Fall 2018	
Recitation Leader , <i>Data Structures</i> , NYU	Spring 2018	

Grader, *Machine Learning*, NYU

Spring 2018

**Outreach &
Services**

Reviewer: ICML (2021); NeurIPS (2021,2022); BDL (2021); ICLR (2022)

Instructor: CDS Undergraduate Research Program (2021); NYU AI School (2022)