

**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

Wesley 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

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*, 2021. (**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*, 2021

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. Backplay: “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

Amazon, Applied Science Intern, Germany Jul 2021 - Sep 2021

- Research in multi-fidelity Bayesian optimization.

Uber, AI Resident, USA Aug 2019 - Jul 2020

- < 1% acceptance rate; research in approximate Bayesian inference.

Google, Software Engineering Intern, USA May 2018 - Aug 2018

- Natural language code search on Kubeflow at KubeCon North America 2018.

Headout, Software Engineer, India Dec 2016 - Jul 2017

- Led internal developer tooling; slashed deployment/rollback downtime by 99%.

StoryXpress, Co-Founder, India May 2013 - Aug 2016

- Designed the in-house OpenGL video engine for creation at scale.

Other Research Projects	Information-Theoretic Reinforcement Learning Sep 2019 - Jan 2020 Advisors: <i>Thang D. Bui, Theofanis Karaletsos, Matthias Poloczek</i> <ul style="list-style-type: none"> • Mutual information measures for model predictive control.
	Representations for Reinforcement Learning Sep 2019 - Nov 2019 Advisors: <i>Jeff Clune, Ashley Edwards</i> <ul style="list-style-type: none"> • Contrastive loss based representations for <i>Go-Explore</i>.
	Survival Analysis for Time-Dependent Covariates Oct 2018 - Dec 2018 Advisor: <i>Rajesh Ranganath</i> <ul style="list-style-type: none"> • <i>Deep Markov Models</i> to model physiology of ICU patients.
	Cooperative zero-sum games Mar 2018 - May 2018 Advisors: <i>Joan Bruna, Cinjon Resnick</i> <ul style="list-style-type: none"> • Q-Learning for non-stationary multi-agent systems.
Technical Skills	Languages: Python, Node, Javascript, C, C++, Java Technologies: PyTorch, TensorFlow, Pyro PPL, CUDA, MySQL, React, Docker, Ansible, OpenGL
Honors & Awards	StackOverflow Top Contributor: Reputation 5.8k (top 7% overall as of Jul 2021); answers reached ~2 million people, 2020 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 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 Experience	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, <i>Machine Learning</i> , NYU Spring 2018
Outreach & Services	Reviewer, ICML 2021, NeurIPS 2021, ICLR 2022 Instructor, CDS Undergraduate Research Program (CURP), 2021