

Sanyam Kapoor

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Education	<p>New York University, <i>PhD in Data Science</i> Sep 2020 - present Advisor: Andrew G. Wilson</p> <ul style="list-style-type: none">Center for Data Science Fellowship, 2020-2025 <p>New York University, <i>MS in Computer Science</i> Sep 2017 - May 2019 Advisor: Joan Bruna</p> <ul style="list-style-type: none">Masters Thesis Fellowship, Courant Institute, 2018 <p>IIT Hyderabad, <i>BTech in Computer Science</i> Aug 2012 - May 2016</p> <ul style="list-style-type: none">TODAI Scholarship, University of Tokyo, 2013Academic Excellence Award, 2012
Publications	<p>S. Kapoor, M. Finzi, A. Wang, and A. G. Wilson. SKIing on Simplices: Kernel Interpolation on the Permutohedral Lattice for Scalable Gaussian Processes. In <i>Proceedings of the International Conference on Machine Learning</i>, 2021a</p> <p>S. Kapoor, T. Karaletsos, and T. D. Bui. Variational Auto-Regressive Gaussian Processes for Continual Learning. In <i>Proceedings of the International Conference on Machine Learning</i>, 2021b</p> <p>T. Moskovitz, R. Wang, J. Lan, S. Kapoor, T. Miconi, J. Yosinski, and A. Rawal. First-Order Preconditioning via Hypergradient Descent. In <i>Beyond First Order Methods in ML NeurIPS Workshop</i>, 2019</p> <p>S. Kapoor. Leveraging Communication for Efficient Sampling, 2019. <i>Masters thesis</i></p> <p>C. Resnick, R. Raileanu, S. Kapoor, A. Peysakhovich, K. Cho, and J. Bruna. Backplay: “Man muss immer umkehren”. In <i>AAAI Workshop on Reinforcement Learning in Games</i>, 2019</p> <p>S. Kapoor. Multi-Agent Reinforcement Learning: A Report on Challenges and Approaches</p>
Industry Experience	<p>Uber AI Labs, US - <i>Resident</i> Aug 2019 - Jul 2020</p> <ul style="list-style-type: none">Less than 1% program acceptance rateResearch in approximate <i>Bayesian</i> inference, reinforcement learning, bandits <p>Google, US - <i>Software Engineering Intern</i> May 2018 - Aug 2018</p> <ul style="list-style-type: none">Implemented end-to-end Natural Language Code Search on KubeflowDemo proposal accepted to KubeCon North America 2018 <p>Headout, India - <i>Software Engineer</i> Dec 2016 - Jul 2017</p> <ul style="list-style-type: none">Led internal developer tooling; reduced onboarding from days to 1/2 hourSlashed application deployment and rollback downtime by 99% <p>StoryXpress, India - <i>Co-Founder</i> May 2013 - Aug 2016</p> <ul style="list-style-type: none">Designed & built the cloud video service for economical video creation at scaleHandled 2000+ videos/month, authored APIs and website for clients like <i>Target</i>
Technical Skills	<p>Languages: Python, Node, Javascript, C, C++, Java</p> <p>Technologies: PyTorch, TensorFlow, Pyro PPL, CUDA, MySQL, React, Docker, Ansible, OpenGL</p>

Research Experience	Epistemic Uncertainty in Chaotic Dynamical Systems Sep 2020 - Dec 2020 Advisor: <i>Andrew G. Wilson</i>
	<ul style="list-style-type: none"> Proposed simple uncertainty measures to quantify chaos in physical systems
	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
	Representation learning for RL 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> for 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 and Curriculum Learning for non-stationary multi-agent systems 	
Honors & Awards	StackOverflow Top Contributor: Reputation 5.7k (top 7% overall as of May 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 0.5% 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
	Instructor , CDS Undergraduate Research Program, Jan 2021