

Suraj Nair

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- EDUCATION** **Stanford University**, Stanford, CA 2018-Present
Ph.D. in Computer Science
Advisors: Chelsea Finn, Silvio Savarese
- California Institute of Technology**, Pasadena, CA 2014-2018
Bachelor of Science in Computer Science GPA: 3.9/4.0
Advisor: Yisong Yue
- EXPERIENCE** **Facebook AI Research**, Research Intern/Student Researcher 2021-2022
Google Brain, Research Intern/Student Researcher 2018-2019
Stanford Vision and Learning Lab, Visiting Researcher 2017
Vizzario, Inc., Machine Learning Consultant 2017
Caltech DOLCIT, Student Researcher 2016-2018
General Electric, Current, Software Development Intern 2016
KloudData, Inc., Software Engineering Intern 2015
- PUBLICATIONS & PREPRINTS** [20] **Suraj Nair**, Aravind Rajeswaran, Vikash Kumar, Chelsea Finn, Abhinav Gupta. R3M: A Universal Visual Representation for Robot Manipulation. *Conference on Robot Learning (CoRL)*. 2022.
- [19] Maximilian Du*, Olivia Y. Lee*, **Suraj Nair**, Chelsea Finn. Play it by Ear: Learning Skills amidst Occlusion through Audio-Visual Imitation Learning. *Robotics: Science and Systems (RSS)*. 2022
- [18] **Suraj Nair**, Eric Mitchell, Kevin Chen, Brian Ichter, Silvio Savarese, Chelsea Finn. Learning Language-Conditioned Robot Behavior from Offline Data and Crowd-Sourced Annotation. *Conference on Robot Learning (CoRL)*. 2021.
- [17] Bohan Wu, **Suraj Nair**, Li Fei-Fei*, Chelsea Finn*. Example-Driven Model-Based Reinforcement Learning for Solving Long-Horizon Visuomotor Tasks. *Conference on Robot Learning (CoRL)*. 2021.
- [16] Mohammad Babaeizadeh, Mohammad Taghi Saffar, **Suraj Nair**, Sergey Levine, Chelsea Finn, Dumitru Erhan. FitVid: Overfitting in Pixel-Level Video Prediction. *Arxiv Preprint*. 2021
- [15] Annie Chen, **Suraj Nair**, Chelsea Finn. Learning Generalizable Robotic Reward Functions from "In-The-Wild" Human Videos. *Robotics: Science and Systems (RSS)*. 2021
- [14] Bohan Wu, **Suraj Nair**, Roberto Martin-Martin, Li Fei-Fei*, Chelsea Finn*. Greedy Hierarchical Variational Autoencoders for Large-Scale Video Prediction, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. 2021
- [13] Stephen Tian, **Suraj Nair**, Frederik Ebert, Sudeep Dasari, Benjamin Eysenbach, Chelsea Finn, Sergey Levine. Model-Based Visual Planning with Self-Supervised Functional Distances. *International Conference on Learning Representations (ICLR)*. 2021.
- [12] Annie Chen*, HyunJi Nam*, **Suraj Nair***, Chelsea Finn. Batch Exploration with Examples for Scalable Robotic Reinforcement Learning. *Robotics and Automation Letters*

(*RA-L*) and *IEEE International Conference on Robotics and Automation (ICRA)*. 2021

[11] Brijen Thananjeyan*, Ashwin Balakrishna*, **Suraj Nair**, Michael Luo, Krishnan Srinivasan, Minh Hwang, Joey E. Gonzalez, Chelsea Finn, Ken Goldberg. Recovery RL: Safe Reinforcement Learning with Learned Recovery Zones. *Robotics and Automation Letters (RA-L) and IEEE International Conference on Robotics and Automation (ICRA)*. 2021

[10] **Suraj Nair**, Silvio Savarese, Chelsea Finn. Goal-Aware Prediction: Learning to Model What Matters. *International Conference on Machine Learning (ICML)*. 2020.

[9] Henrik Marklund*, **Suraj Nair***, Chelsea Finn. Exact (Then Approximate) Dynamics Programming for Deep Reinforcement Learning *Workshop on Biases, Invariances, and Generalization in RL, International Conference on Machine Learning (ICML)*. 2020.

[8] **Suraj Nair**, Chelsea Finn. Hierarchical Foresight: Self-Supervised Learning of Long-Horizon Tasks via Visual Subgoal Generation. *International Conference on Learning Representations (ICLR)*. 2020.

[7] **Suraj Nair**, Mohammad Babaeizadeh, Chelsea Finn, Sergey Levine, Vikash Kumar. Time Reversal As Self-Supervision. *IEEE International Conference on Robotics and Automation (ICRA)*. 2020.

[6] **Suraj Nair**, Yuke Zhu, Silvio Savarese, Li Fei-Fei. Causal Induction from Visual Observations for Goal Directed Tasks. *Workshop on Causal Machine Learning, Neural Information Processing Systems (NeurIPS)*. 2019.

[5] Sudeep Dasari, Frederik Ebert, Stephen Tian, **Suraj Nair**, Bernadette Bucher, Karl Schmeckpeper, Siddharth Singh, Sergey Levine, Chelsea Finn. RoboNet: Large-Scale Multi-Robot Learning. *Conference on Robot Learning (CoRL)*. 2019.

[4] De-An Huang*, **Suraj Nair***, Danfei Xu*, Yuke Zhu, Animesh Garg, Li Fei-Fei, Silvio Savarese, Juan Carlos Niebles. Neural Task Graphs: Generalizing to Unseen Tasks from a Single Video Demonstrations. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. 2019.

[3] Danfei Xu*, **Suraj Nair***, Yuke Zhu, Julian Gao, Animesh Garg, Li Fei-Fei, Silvio Savarese. Neural Task Programming: Learning to Generalize Across Hierarchical Tasks. *IEEE International Conference on Robotics and Automation (ICRA)*. 2018.

[2] Men-Andrin Meier, Zachary E Ross, Anshul Ramachandran, Ashwin Balakrishna, **Suraj Nair**, Peter Kundzicz, Zefeng Li, Jennifer Andrews, Egill Hauksson, Yisong Yue. Reliable RealTime Seismic Signal/Noise Discrimination With Machine Learning. *Journal of Geophysical Research: Solid Earth*. 2019.

[1] **Suraj Nair**, Anshul Ramachandran, Peter Kundzicz. Annotated Reconstruction of 3D Spaces Using Drones. *IEEE MIT URTC*. 2017. **Best Paper Presentation**.

INVITED TALKS

Supervising Robot Learning with Language and Video from the Web

Covariant.ai. October 2022

MILA. September 2022

Toyota Research Institute. June 2022

Nuro.ai. April 2022

University of Cambridge Language Technology Lab Seminar. November 2021

Time Reversal as Self-Supervision

Berkeley Robotic Artificial Intelligence and Learning Lab. October 2018

TEACHING	<i>Head Teaching Assistant, Stanford University</i>		
	CS 330: Deep Multi-Task and Meta Learning	2022	
	<i>Teaching Assistant, Stanford University</i>		
	CS 330: Deep Multi-Task and Meta Learning	2019, 2020	
	<i>Teaching Assistant, California Institute of Technology</i>		
	CS/EE 155: Machine Learning/Data Mining	2017	
	CS 121: Introduction to Relational Databases	2016	
AWARDS & HONORS	Best Paper Award (ICRA Scaling Robot Learning Workshop)	2022	
	<i>For "R3M: A Universal Visual Representation for Robot Manipulation"</i>		
	Robotics: Science and Systems (RSS) Pioneer	2022	
	<i>Selected as one of 30 top early career researchers in robotics</i>		
	ICLR Highlighted Reviewer Award	2021, 2022	
	<i>Awarded to top 10% of reviewers</i>		
	Stanford Nominee for Apple ML/AI PhD Fellowship	2020	
	<i>Selected as one of 5 university nominees</i>		
	National Science Foundation Graduate Research Fellowship	2018-2021	
	Best Paper Presentation - IEEE MIT URTC	2017	
Caltech Summer Undergraduate Research Fellowship Recipient	2017		
1 st Place GE Digital Intern Hackathon	2016		
PROFESSIONAL ACTIVITIES	<i>Workshop Organization:</i>		
	Co-Organizer: Deep Reinforcement Learning Workshop at NeurIPS 2022		
	Co-Organizer: Workshop on Learning from Diverse, Offline Data at RSS 2022		
	<i>Paper Reviewing:</i>		
	Neural Information Processing Systems (NeurIPS) 2020, 2021		
	International Conference on Machine Learning (ICML) 2020-2022		
	International Conference on Learning Representations (ICLR) 2019-2021		
	IEEE International Conference on Robotics and Automation (ICRA) 2019-2021		
	Conference on Robot Learning (CoRL) 2021, 2022		
	IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2019, 2020		
	International Conference on Computer Vision (ICCV) 2021		
	ADVISING & MENTORSHIP	Niveditha Iyer	B.S., Stanford
		Patricia Strutz	B.S., Stanford
		Olivia Lee	B.S., Stanford
		Maximilian Du	B.S., Stanford
HyunJi Nam		B.S. Stanford, Next: Software engineer at ScaleAI	
Annie Chen		B.S. Stanford, Next: Ph.D. CS, Stanford	