

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** [19] **Suraj Nair**, Aravind Rajeswaran, Vikash Kumar, Chelsea Finn, Abhinav Gupta. R3M: A Universal Visual Representation for Robot Manipulation. *Arxiv Preprint*. 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 Haukssson, 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 2021
University of Cambridge Language Technology Lab Seminar.

Time Reversal as Self-Supervision 2018
Berkeley Robotic Artificial Intelligence and Learning Lab.

TEACHING

Teaching Assistant, Stanford University
CS 330: Deep Multi-Task and Meta Learning 2019, 2020

Teaching Assistant, California Institute of Technology
CS/EE 155: Machine Learning/Data Mining 2017

CS 121: Introduction to Relational Databases 2016

AWARDS & HONORS

ICLR Reviewer Award 2021

Stanford Nominee for Apple PhD Fellowship 2020

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 *Paper Reviewing:*

ACTIVITIES 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
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2019, 2020
International Conference on Computer Vision (ICCV) 2021