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

[11] Brijen Thananjeyan*, Ashwin Balakrishna*, **Suraj Nair**, Michael Luo, Krishnan Srinivasan, Minho Hwang, Joey E. Gonzalez, Chelsea Finn, Ken Goldberg. Recovery Rl: Safe Reinforcement Learning with Learned Recovery Zones. *Robotics and Automoation 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 2022
Nuro.ai.

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

Robotics: Science and Systems (RSS) Pioneer 2022
Selected as one of 30 top early career researchers in robotics
ICLR Highlighted Reviewer Award 2021, 2022
Awarded to top 10% of reviewers
Stanford Nominee for Apple ML/AI PhD Fellowship 2020
Selected as one of 5 university nominees
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

Paper Reviewing:
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

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