Sasha Sax

✉ sax@berkeley.edu
🌐 alexsax.github.io

Education		
Doctor of Philosophy; Electrical Engineering and Computer Science		2023 (expected)
University of California, Berkeley; Berkeley, CA	Advisors: Jitendra Malik & Amir Zamir	
Masters of Science; Computer Science (Distinction in Research).		2018
Stanford University; Stanford, CA	Advisor: Silvio Savarese	
Bachelor of Science; Mathematics		2018
Stanford University; Stanford, CA		

Awards		
Best Paper Award Nomination, CVPR		2020
Robust Learning Through Cross-Task Consistency		
Best Paper Award, CVPR		2018
Taskonomy: Disentangling Task Transfer Learning		
NVIDIA Pioneering Research Award		2018
Embodied Real-World Active Perception		
Stanford University Distinction in Research		2018
Computational Evidence for Structure in the Space of Tasks		
Winner of CVPR 2019 Habitat Embodied Agents Challenge		2019
Mid-Level Visual Representations Improve Generalization and Sample Complexity		
Outstanding Reviewer, CVPR 2020		2020

Recent Experience		
Facebook AI Research, Research Intern; Menlo Park, CA		2018-2019
Improved perception for visuomotor policies by injecting computational visual biases (Mid-Level Representations).		
Stanford University, Research Assistant; Stanford, CA		2017-2018
Developed methods for computing similarity between tasks and then using this similarity to develop efficient transfer curricula (Taskonomy). Also, created perceptually realistic environments for training embodied agents (Gibson).		

Teaching		
Berkeley CS 189/289A: Machine Learning (TA)		2020
Stanford CS 331B: Representation Learning (TA)		2018
Stanford CS 103: Mathematical Foundations of Computer Science (TA)		2015

Selected Papers	
Robust Learning Through Cross-Task Consistency **[Best Paper Award Nominee, Oral]**	
Amir Zamir*, Alexander Sax*, Teresa Yeo, Oguzhan Fatih Kar, Nikhil Cheerla, Rohan Suri, Zhangjie Cao, Jitendra Malik, Leonidas Guibas. CVPR, 2020.	
Mid-Level Visual Representations Improve Generalization and Sample Efficiency for Learning Visuomotor Policies **[Oral]**	
Alexander Sax, Jeffrey O. Zhang, Bradley Emi, Amir Zamir, Leonidas Guibas, Silvio Savarese Jitendra Malik. *CoRL*, 2019. *BayLearn*, 2019.	
Taskonomy: Disentangling Task Transfer Learning **[Best Paper Award, Oral]**	

Amir Zamir, Alexander Sax*, William B. Shen*, Leonidas Guibas, Jitendra Malik, Silvio Savarese. *CVPR*, 2018. (Best Paper)

Embodied Real-World Active Perception [Spotlight]
Fei Xia*, Zhiyang He*, Amir Zamir*, Alexander Sax, Silvio Savarese. *CVPR*, 2018.

Talks	Visual Biases in Embodied Agents, Facebook AI Research, Menlo Park, CA	Apr. 2019

Volunteering	**BAIR Undergraduate Mentoring:** Graduate Mentor	2019-Present
	PyTorch: Developer	2017-Present
	3DV Conference: Student Organizer	2016
	Stanford Class of 2016: Junior Class President	2014-2015
	East Palo Alto Tutoring and Tennis: Tutor	2013-2014
	Business Association of Stanford Entrepreneurial Students: social good subgroup	2014

Older Experience	**Microsoft Corporation**, Mountain View, CA	Software Engineering Intern,	2016

Improved response time in Powerpoint Designer via better parallelism.

Stanford University, Stanford, CA — Research Assistant, 2015

Investigated square-finding algorithms to find faster ones—or else to show they don't exist. I found alternative algorithms similar to best-known speed. I also investigated alternative algorithms for replacement paths in the presence of edge failures. I was supervised by Dr. Virginia Williams.

RTI International, Washington, DC — Software Engineering Intern, 2014

Created a statistical analysis package which assesses effectiveness of interventions in national educational systems in developing countries. The package was used by the governments of Kenya, Ghana, and Zambia. I also designed and implemented software development process that required coordination between multiple teams, and drove this change through institutional resistance by gathering consensus.

Blackboard Inc., Washington, DC — Software Engineering Intern, 2013

Created an early-warning analytics system to monitor traffic and system health in real-time. The system used NodeJS, MongoDB, and Hadoop.

RTI International, Washington, DC — Software Engineering Intern, 2010-2012

Developed an automated survey-data cleaning process within STATA to reduce survey turnaround from 2 months to 1 week.

Papers	[7] *Robust Learning Through Cross-Task Consistency* [Best Paper Award Nominee, Oral]

Amir Zamir*, Alexander Sax*, Teresa Yeo, Oguzhan Fatih Kar, Nikhil Cheerla, Rohan Suri, Zhangjie Cao, Jitendra Malik, Leonidas Guibas. CVPR, 2020.

[6] *Side-Tuning: A Baseline for Network Adaptation via Additive Side Networks*
Jeffrey O. Zhang, Alexander Sax, Amir Zamir, Leonidas Guibas, Silvio Savarese, Jitendra Malik. *Arxiv*, 2019.

Sasha Sax

✉ sax@berkeley.edu
🌐 alexsax.github.io

[5] *Learning to Navigate via Mid-Level Visual Priors*
Alexander Sax, Jeffrey O. Zhang, Bradley Emi, Amir Zamir, Leonidas Guibas, Silvio Savarese
Jitendra Malik. *CoRL*, 2019.

[4] *Mid-Level Visual Representations Improve Generalization and Sample Efficiency for
Learning Visuomotor Policies* **[Oral]**
Alexander Sax, Jeffrey O. Zhang, Bradley Emi, Amir Zamir, Leonidas Guibas, Silvio Savarese
Jitendra Malik. *Arxiv* 2018. *BayLearn*, 2019. (Oral)

[3] *Taskonomy: Disentangling Task Transfer Learning* **[Best Paper Award, Oral]**
Amir Zamir, Alexander Sax*, William B. Shen*, Leonidas Guibas, Jitendra Malik, Silvio
Savarese. *CVPR*, 2018.

[2] *Embodied Real-World Active Perception* **[Spotlight]**
Fei Xia*, Zhiyang He*, Amir Zamir*, Alexander Sax, Silvio Savarese. *CVPR*, 2018. (Spotlight)

[1] *Joint 2D-3D-Semantic Data for Indoor Scene Understanding*
Iro Armeni*, Alexander Sax*, Amir Zamir*, Silvio Savarese. *Arxiv (preprint)*, 2016.