KATE SANDERS

ksande25@jhu.edu

(408)-963-9110

EDUCATION

Johns Hopkins University 2021 - Present
  Ph.D. in Computer Science,   Advisor: Benjamin Van Durme *Expected May 2025*

Johns Hopkins University 2021 - 2023
  M.S. in Computer Science,   Advisor: Benjamin Van Durme,   GPA: 3.9

University of California, Berkeley 2017 - 2020
  B.A. in Computer Science,   Advisor: Ken Goldberg,   GPA: 3.9

RESEARCH EXPERIENCE

Center for Language and Speech Processing, Johns Hopkins University 2021 – Present
  PhD Researcher

AUTOLab, UC Berkeley Artificial Intelligence Research 2018 –2021
  Undergraduate Researcher

The Miller Lab, UC Berkeley Molecular & Cell Biology 2018 – 2018
  Undergraduate Research Assistant

PUBLICATIONS

Sanders, K., Etter, D., Kriz, R., Van Durme, B. (2023). MultiVENT: Multilingual Videos of Events with Aligned Natural Text. *Thirty-Seventh Annual Conference on Neural Information Processing Systems (NeurIPS) Track on Datasets and Benchmarks.* 2023

Sanders, K., Kriz, R., Liu, A., Van Durme, B. (2022). Ambiguous Images With Human Judgments for Robust Visual Event Classification. *Thirty-Sixth Annual Conference on Neural Information Processing Systems (NeurIPS) Track on Datasets and Benchmarks.* 2022

Huang, H., Dominguez-Kuhne, M., Ichnowski, J., Danielczuk, M., Satish, V., **Sanders, K.**, M., Lee, A., Angelova, A., Vanhoucke, V., Goldberg, K. (2021). Mechanical Search on Shelves using Lateral Access X-RAY. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).* 2021

Huh, T. M., **Sanders, K.**, Danielczuk, M., Li, M., Chen, Y., Goldberg, K., Stuart, H. S. (2021). A Multi-Chamber Smart Suction Cup for Adaptive Gripping and Haptic Exploration. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).* 2021

Walker, A., Raliski, B., Nguyen, D., Zhang, P., **Sanders, K.**, Karbasi, K., Miller, E. (2021). Imaging Voltage in Complete Neuronal Networks Within Patterned Microislands Reveals Preferential Wiring of Excitatory Hippocampal Neurons. *Frontiers in Neuroscience, 15.* 2021

Walker, A., Raliski, B., Karbasi, K., Zhang, P., **Sanders, K.**, Miller, E. (2021). Optical Spike Detection and Connectivity Analysis With a Far-Red Voltage-Sensitive Fluorophore Reveals Changes to Network Connectivity in Development and Disease. *Frontiers in Neuroscience, 15.* 2021

Sanders, K., Danielczuk, M., Mahler, J., Tanwani, A., Goldberg, K. (2020). Non-Markov Policies to Reduce Sequential Failures in Robot Bin Picking. *IEEE International Conference on Automation Science and Engineering (CASE).* 2020

Song, J., Tanwani, A., Ichnowski, J., Danielczuk, M., **Sanders, K.**, Chui, J., Aparicio Ojea, J., Goldberg, K. (2020). Robust Task-Directed Grasp Planning as a Service. *IEEE International Conference on Automation Science and Engineering (CASE).* 2020

TEACHING

CS 189/289A: Introduction to Machine Learning (UC Berkeley)
Head TA Fall 2020
  Led staff of 20+ TAs and tutors to run UC Berkeley's introductory machine learning course. Designed and executed a novel course structure for online teaching.
Teaching Assistant Fall 2019
  Taught discussion sections of 5-15 students, led midterm and final exam creation, and held office hours and review sessions for UC Berkeley's introductory machine learning course.

CS 370: Adaptive Instruction Methods in Computer Science (UC Berkeley)
Teaching Assistant Spring 2020
  Collaborated to develop course syllabus, assignments, and exams. Facilitated peer tutoring for EECS classes and maintained tutor and student matching software. Trained 60+ computer science TAs and tutors.

CS 61A: Structure and Interpretation of Computer Programs (UC Berkeley)
Teaching Assistant Spring 2019
  Taught discussion and lab sections, hosted office hours, and proctored exams for UC Berkeley's introductory computer science course.

MENTORING

Ziyan Li 2022 – 2023
M.S. 2023

Jimena Guallar-Blasco 2023 – Present
B.S. 2024 (Expected)

Shepard Xia 2023 – Present
M.S. 2025 (Expected)

SERVICE

Reviewer
  NeurIPS 2023, Instruction Workshop @ NeurIPS 2023, NeurIPS 2022, IROS 2021, CASE 2020 (secondary)

CLSP Diversity in Admissions Committee Member 2022 – Present

CLSP Application Support Program Volunteer 2022 – Present

AI Summer Camp Volunteer Summer 2020
  Taught deep learning basics to high school students in the AI4ALL summer program to increase diversity and inclusion in AI education, research, and development.

TECHNICAL SKILLS

Languages: **Python**, Bash, JavaScript, C, Java
Libraries/Frameworks: **PyTorch**, **NumPy**, Tensorflow, Amazon Mechanical Turk

RELEVANT COURSEWORK

ARTIFICIAL INTELLIGENCE	COMPUTER SCIENCE	MATHEMATICS
Deep Neural Networks	Data Structures	Optimization Models
Machine Learning	Algorithms	Probability and Random Processes
Information Retrieval	Database Systems	Linear Algebra
ML for Trustworthy AI	Human-Computer Interaction	Combinatorics & Graph Theory
Artificial Intelligence	Operating Systems	Discrete Math and Probability
Deep Reinforcement Learning	Computer Architecture	Calculus
Computational Social Cognition	Computer Technology Ethics	Network Structure and Epidemics