

Samuel Li

☎ (217) 819-2366 🌐 github.com/samwli 🔗 samwli.github.io 💼 linkedin.com/in/samuelwli ✉ swli@andrew.cmu.edu

EDUCATION

Carnegie Mellon University, QPA: 4.07/4.0 May 2025
M.S. in Robotics | Funded Graduate Research Assistant
 Courses: Learning for 3D Vision, Computer Vision, Intro to Robot Learning, Optimal Control & Reinforcement Learning

University of Illinois Urbana-Champaign, GPA: 3.88/4.0 May 2023
B.S. in Mathematics & Computer Science | Chancellor's Scholar, James Scholar, Undergrad Research Scholar
 Courses: Machine Learning, Reinforcement Learning, Machine Perception, Algorithms, Hon. Real Analysis, Hon. Lin Alg

PUBLICATIONS

S. Li, S. Bhagat, J. Campbell, Y. Xie, W. Kim, K. Sycara, and S. Stepputtis, *ShapeGrasp: Zero-Shot Task-Oriented Grasping with LLMs through Geometric Decomposition*, IROS 2024 (Oral)

S. Li, S. Bhagat, J. Campbell, Y. Xie, W. Kim, K. Sycara, and S. Stepputtis, *Geometric Shape Reasoning for Zero-Shot Task-Oriented Grasping*, 3D Visual Representations for Robot Manipulation Workshop, ICRA 2024

S. Bhagat, **S. Li**, J. Campbell, Y. Xie, K. Sycara, and S. Stepputtis, *Let Me Help You! Neuro-Symbolic Short-Context Action Anticipation*, RA-L 2024

A. Zhuo*, **S. Li***, P. Sriram*, X. Li*, J. Dong*, A. Sharma, Y. Zhong, S. Luo, V. Kindratenko, J. Heintz, C. Zallek, and Y. Wang, *YouTubePD: A Multimodal Benchmark for Parkinson's Disease Analysis*, Datasets and Benchmarks Track, NeurIPS 2023

S. Li, R. Sriver, and D. E. Miller, *Skillful Prediction of Seasonal Energy Consumption Based on Surface Climate Information*, Environmental Research Letters 2022

RESEARCH EXPERIENCE

Research Intern/Contractor, Embodied Foundation Models at Wayve AI Mountain View, CA
Science Division, Supervised by Dr. Vijay Badrinarayanan (VP of AI) May 2024 – Present

- Developing a 3D vision foundation model for 3D reconstruction, pose estimation, and dense tracking/scene flow
- Learns dense, long-context contrastive features and 3D pointmaps using large-scale data and distributed training

Graduate Research Assistant, Robotics at CMU Pittsburgh, PA
AART Lab, Supervised by Prof. Katia Sycara Oct. 2023 – Present

- Using symbolic representations to constrain LLM hypotheses for zero-shot 3D segmentation and manipulation
- Introduced a vision-based action anticipation model with a novel attention mechanism for robot collaboration

Undergraduate Researcher, Computer Vision at UIUC Urbana, IL
Yuxiong Lab, Supervised by Prof. Yuxiong Wang March 2022 – Sept. 2023

- Employed transformers and few-shot/meta-learning techniques to detect Parkinsonism from visual/audio modalities
- Created the first public Parkinson's video dataset and validated our models on private, real patient medical data

Undergraduate Researcher, Atmospheric Sciences at UIUC Urbana, IL
Climate Dynamics and Variability Group, Supervised by Prof. Ryan Sriver Feb. 2020 – May 2023

- Developed temporal frameworks for energy demand prediction based on global climate data
- Modeled dynamic climate relationships on varying time scales using machine learning techniques

OTHER EXPERIENCE

Software Engineer Intern, Capital One McLean, VA
Card Tech Summer 2023

- Developed a Playwright plugin for parallelized e2e automated testing, leading to team-wide migration

Enterprise Data and Machine Learning Summer 2022

- Launched a dashboard driven by large-scale internal data to inform business decision making

Course Assistant, Computer Science at UIUC Urbana, IL
Modeling and Learning in Data Science (CS 307) Fall 2022
Intro to Computer Science (CS 125) Spring 2020