YIHONG SUN

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EDUCATION

Cornell University, Ithaca, NY 2022–Present
- Ph.D. Student in Computer Science
- Advisor: Prof. Bharath Hariharan

Johns Hopkins University, Baltimore, MD 2018–2022
- B.S. in Computer Science, Cognitive Science, Neuroscience, and Applied Mathematics and Statistics
- Advisor: Prof. Alan Yuille
- Cumulative GPA: 4.00 / 4.00

PUBLICATIONS

[6] MOD-UV: Learning Mobile Object Detectors from Unlabeled Videos.
Yihong Sun, Bharath Hariharan.
In ECCV 2024.

[5] Dynamo-Depth: Fixing Unsupervised Depth Estimation for Dynamical Scenes.
Yihong Sun, Bharath Hariharan.
In NeurIPS 2023.

[4] Amodal Segmentation through Out-of-Task and Out-of-Distribution Generalization with a Bayesian Model.
Yihong Sun, Adam Kortylewski, Alan Yuille.
In CVPR 2022.

[3] Robust Instance Segmentation through Reasoning about Multi-Object Occlusion.
Xiaoding Yuan, Adam Kortylewski, **Yihong Sun**, Alan Yuille.
In CVPR 2021.

[2] Robust Object Detection Under Occlusion With Context-Aware CompositionalNets.
Angtian Wang*, **Yihong Sun***, Adam Kortylewski, Alan Yuille.
In CVPR 2020.
(*equal contribution)

[1] Compositional Convolutional Neural Networks: A Robust and Interpretable Model for Object Recognition under Occlusion.
Adam Kortylewski, Qing Liu, Angtian Wang, **Yihong Sun**, Alan Yuille.
In IJCV 2020.

EXPERIENCES

Google DeepMind, Student Researcher May 2024 - Present
Hosts: Ting Liu, Liangzhe Yuan, Jennifer Sun, Long Zhao, Hao Zhou

Cornell University, Graduate Research Assistant Aug 2022 - Present
Advisor: Bharath Hariharan
- Worked on unsupervised monocular depth estimation for dynamical scenes by modeling independent motion.
- Worked on mobile object discovery by exploiting temporal information in unlabeled videos.

MIT, Research Intern May 2021 - July 2022

Advisor: Josh Tenenbaum

– Worked on learning physics estimator from single-view RGBD videos with neural radiance fields.

Johns Hopkins University, Research Intern May 2019 - May 2022

Advisor: Alan Yuille

– Worked on object detection under partial occlusions by regulating contextual bias.

– Worked on weakly-supervised amodal segmentation using Bayesian models.

HONORS & AWARDS

– NSF Graduate Research Fellowship 2023

– NeurIPS'23 Scholar Award 2023

– JHU CS Outstanding Senior Award 2022

– International Medicine Olympiad Silver Medal 2017

– USA Biology Olympiad Semi-Finalist 2017

TEACHINGS

Graduate TA, Cornell University

– CS 4670 Introduction to Computer Vision Spring 2023

– CS 4787 Principles of Large-Scale Machine Learning Fall 2022

Undergraduate TA, Johns Hopkins University

– EN.601.783 Vision as Bayesian Inference Spring 2022

– AS.050.375 Probabilistic Models of the Visual Cortex Fall 2021

– EN.601.226 Data Structures Spring 2021

– AS.050.375 Probabilistic Models of the Visual Cortex Fall 2020

– EN.601.226 Data Structures Fall 2020

– EN.601.226 Data Structures Spring 2020

SERVICE & OUTREACH

Invited Reviewer

– CVPR (2023, 2024), ICCV (2023), ECCV (2024), NeurIPS (2024)

Diversity & Inclusion

– Reviewer, Cornell CS PhD Admission 2023

– Mentor, Cornell Student-Applicant Support Program 2022 – 2024

– Volunteer, Cornell CS PhD Visit Day 2022 – 2024

– Mentor, JHU CS Small Group 2020 – 2021

SKILLS

– Python, PyTorch, JAX, Java, C/C++, MATLAB, R, LaTeX