DANDAN SHAN

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EDUCATION

University of Michigan - Ann Arbor, MI, USA   *Aug 2020 - May 2025 (expected)*
Ph.D. student, Computer Science and Engineering

University of Michigan - Ann Arbor, MI, USA   *Aug 2018 - May 2020*
M.S.E., Electrical and Computer Engineering

Soochow University, Jiangsu, China   *Sep 2014 - Jun 2018*
B. Eng., Software Engineering , Rank: 1/70

RESEARCH INTERESTS

Computer Vision	Video Understanding, 3D reconstruction, Hand-object Interaction, Human Action
Robotics	Vision for Robotics, Imitation Learning

PUBLICATIONS

Slot-Level Robotic Placement via Visual Imitation from Single Human Video
Dandan Shan, Kaichun Mo, Wei Yang, Yu-Wei Chao, David Fouhey, Dieter Fox, Arsalan Mousavian.
In Submission.

Reconstructing Hands in 3D with Transformers
Georgios Pavlakos, **Dandan Shan**, Ilija Radosavovic, Angjoo Kanazawa, David Fouhey, Jitendra Malik.
CVPR 2024.

Towards A Richer 2D Understanding of Hands at Scale
Tianyi Cheng*, **Dandan Shan***, Ayda Sultan Hassen, Richard Higgins, David Fouhey
NeurIPS 2023.

EPIC-KITCHENS VISOR Benchmark: VIdeo Segmentations and Object Relations
Ahmad Darkhalil*, **Dandan Shan***, Bin Zhu*, Jian Ma*, Amlan Kar, Richard Higgins, Sanja Fidler, David Fouhey, Dima Damen.
NeurIPS 2022 Datasets and Benchmarks.

COHESIV: Contrastive Object and Hand Embedding Segmentation In Video
Dandan Shan*, Richard Higgins*, David Fouhey.
NeurIPS 2021.

Understanding Human Hands in Contact at Internet Scale
Dandan Shan, Jiaqi Geng*, Michelle Shu*, David Fouhey.
CVPR 2020 (Oral).

WORK EXPERIENCE

Research Scientist Intern, NVIDIA Seattle Robotics Lab   Jun 2024 - Nov 2024
Advisor: Kaichun Mo, Yu-Wei Chao, Wei Yang, Arsalan Mousavian, Dieter Fox

Designed a modular system to learn robotic placement from a single human video by leveraging a novel slot-level placement detector Slot-Net and several advanced visual foundation models.

Research Scientist Intern, Adobe Research   May 2022 - Nov 2022
Advisor: Jimei Yang, Oliver Wang

Worked on consistent video editing on human interaction videos using layered neural atlases.

Graduate Student Research Assistant, Univisity of Michigan Jan 2019 - Present
PhD Advisor: David Fouhey

Worked on Computer Vision, focusing on understanding human hands and its interactions.

System Development Intern, CalmCar Vision System Co. Aug 2017 - May 2018
Mentor: Shiqing Cheng

Worked on a real-time traffic lights state recognition system which has been used in the Advanced Driver Assistance System in cooperation with SAIC Motor Co. Ltd.

TEACHING EXPERIENCE

AI4ALL Summer Program, University of Michigan 2020, 2021
Project Instructor

Designed and instructed vision projects on Object Detection and Virtual Background.

TALK

Understanding Human Hands and Interactions	Invited talk at Columbia University, Mar 2024
Towards A Richer 2D Understanding of Hands at Scale	CVPR2023 4DHOI Workshop
Understanding Human Hands in Contact at Internet Scale	Aibee Inc., Jul 2021

PROFESSIONAL SERVICE

Reviewer
Conference: CVPR, ECCV, ICCV, NeurIPS, NeurIPS Datasets and Benchmarks, ICLR
Journal: Pattern Recognition

Organizer
Hand-Object Segmentation (HOS) Challenge, CVPR EPIC workshop 2023
Hand-Object Segmentation (HOS) Challenge, CVPR EgoVis workshop 2024

Department services
University of Michigan Ph.D. Admissions Committee, AY 2022-2023

HONORS AND SCHOLARSHIP

2nd Place Winner of the Ego4D-Ego-Exo4D Challenge in Hand Pose.	EgoVis@CVPR 2024
Outstanding Reviewer Award	ECCV 2022
Rackham International Students Fellowship (University of Michigan)	2021
Outstanding Graduate (Soochow University)	Jun 2018
Excellent Thesis (Soochow University)	Jun 2018
Grand Prize Excellent Student Scholarship (Soochow University)	Oct 2017
Innovation Award (Soochow University)	Oct 2017
Special Award for Social Work (Soochow University)	2015, 2016, 2017
Comprehensive Performance Awards (Soochow University)	2015, 2016, 2017

OUTREACH

Volunter, New York Vision Day, New York University	April 2024
Social Media Student Takeover, Michigan AI Lab, University of Michigan	Jul 2023 - Aug 2023
Organizer, AI seminar, University of Michigan	Aug 2021 - May 2022
Coordinator, Computer Vision Reading Group, University of Michigan	Aug 2020 - May 2021
Webmaster, Ensemble of CSE Ladies, University of Michigan	Aug 2020 - Present
Mentor, Ensemble of CSE Ladies, University of Michigan	Sep 2019 - Dec 2019

Web designer and maintainer, Vision@UMich offical webpage — Sep 2019 - Present
Volunteer, AI Symposium at the University of Michigan — Oct 2019
Web maintainer, TEDxSuzhou official webpage — Sep 2016 - Jan 2017
Social Investigation on Children's Education Status in Ningxia Hui Autonomous Region — Jul 2015

Last updated: Nov 2024.