

DANDAN SHAN

Office 3929, 2260 Hayward St, Ann Arbor, MI, 48109
(01)734-2722-999 ◊ dandans@umich.edu ◊ ddshan.github.io

EDUCATION

University of Michigan - Ann Arbor, MI, USA Ph.D. student, Computer Science and Engineering	<i>Aug 2020 - May 2025 (expected)</i>
University of Michigan - Ann Arbor, MI, USA M.S.E., Electrical and Computer Engineering	<i>Aug 2018 - May 2020</i>
Soochow University, Jiangsu, China B. Eng., Software Engineering , Rank: 1/70	<i>Sep 2014 - Jun 2018</i>

RESEARCH INTERESTS

Computer Vision Video Understanding, Hand-object Interaction, 3D reconstruction, VLM
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 <i>Advisor: Kaichun Mo, Yu-Wei Chao, Wei Yang, Arsalan Mousavian, Dieter Fox</i>	Jun 2024 - Nov 2024
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Designed a modular system to learn robotic placement from a single human video by leveraging several advanced visual foundation models and used GenAI and LLM for data generation.

Research Scientist Intern, Adobe Research <i>Advisor: Jimei Yang, Oliver Wang</i>	May 2022 - Nov 2022
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Worked on consistent video editing on human interaction videos using layered neural atlases.

Graduate Student Research Assistant, Univisrity 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

Workshop Organizer

Workshop on “Agents in Interaction, from Humans to Robots”, CVPR 2025

Challenge Organizer

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

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

Reviewer

Conference: CVPR, ECCV, ICCV, NeurIPS, NeurIPS Datasets and Benchmarks, ICLR

Journal: Pattern Recognition

Department services

University of Michigan Ph.D. Admissions Committee, AY 2024-2025

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

Volunteer, 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 official 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: Mar 2025.