

# DANDAN SHAN

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## EDUCATION

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**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

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

## PUBLICATIONS

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**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

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**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, University 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

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**AI4ALL Summer Program, University of Michigan**

2020, 2021

*Project Instructor*

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

## TALK

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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

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**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

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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

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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: Dec 2024.