

# Junyi Zhang

✉ junyi42zhang@gmail.com ◊ 🌐 Junyi42 ◊ 🌐 junyi42.com

## RESEARCH INTERESTS

---

My research interests mainly lie in **computer vision**, **deep generative models**, and **representation learning**. I am now focusing on the **application of diffusion models**, exploring its potential for **both generation and perception scenarios**. I also have a background in action recognition, self-supervised learning, and other modalities including video, 3D, human motion, and language.

## EDUCATION

---

**Berkeley AI Research, University of California at Berkeley** California, United States  
Ph.D. in Computer Science, Advised by *Prof. Trevor Darrell* Sept. 2024 - Present

**SEIEE, Shanghai Jiao Tong University** Shanghai, China  
B.Eng. in Computer Science and Technology (Zhiyuan Honors Program of Eng., Top 5%) Sept. 2020 - June 2024

## SELECTED PUBLICATIONS

---

### MonST3R: A Simple Approach for Estimating Geometry in the Presence of Motion

Junyi Zhang, Charles Herrmann<sup>+</sup>, Junhwa Hur, Varun Jampani, Trevor Darrell, Forrester Cole, Deqing Sun\*, Ming-Hsuan Yang\*.

*Under review*, 2024. [[Webpage](#)] [[ArXiv:2410.03825](#)]

### Telling Left from Right: Identifying Geometry-Aware Semantic Correspondence

Junyi Zhang, Charles Herrmann, Junhwa Hur, Eric Chen, Varun Jampani, Deqing Sun\*, Ming-Hsuan Yang\*.

*CVPR*, 2024. [[Webpage](#)] [[ArXiv:2311.17034](#)]

### A Tale of Two Features: Stable Diffusion Complements DINO for Zero-Shot Semantic Correspondence

Junyi Zhang, Charles Herrmann, Junhwa Hur, Luisa F. Polanía, Varun Jampani, Deqing Sun, Ming-Hsuan Yang.

*NeurIPS*, 2023. [[Webpage](#)] [[ArXiv:2305.15347](#)]

### LayoutDiffusion: Improving Graphic Layout Generation by Discrete Diffusion Probabilistic Models

Junyi Zhang, Jiaqi Guo, Shizhao Sun, Jian-Guang Lou, Dongmei Zhang.

*ICCV*, 2023. [[Webpage](#)] [[ArXiv:2303.11589](#)]

## EXPERIENCE

---

**Google DeepMind, Cambridge** *Remote*  
Research Collaborator – Supervisor: *Prof. Ming-Hsuan Yang* and *Dr. Deqing Sun* April 2023 - Present

- Explore and improve diffusion representations for semantic correspondence
- Explore methods for feed-forward 4D reconstruction from single video

**University of California, Merced - Vision Learning Lab** *Merced, California*  
Visiting Student – Supervisor: *Prof. Ming-Hsuan Yang* June 2023 - Oct. 2023

- Explore and improve diffusion representations for semantic correspondence

**Microsoft Research Asia - Data, Knowledge and Intelligence Group** *Beijing, China*  
Research Intern – Mentor: *Dr. Shizhao Sun* and *Dr. Jian-Guang Lou* July 2022 - Dec. 2022

- Build discrete diffusion models for layout synthesis

**Shanghai Jiao Tong University - Machine Vision and Intelligence Group** *Shanghai, China*  
Undergraduate Research Intern – Supervisor: *Prof. Yong-Lu Li* Oct. 2021 - April 2023

- Build diffusion models for interactive motion generation
- Experiment on extending multimodal action recognition to video dataset

- Experiment on incorporating human knowledge into HOI detection

## SELECTED AWARDS

---

<b>Best Bachelor Thesis</b> (Top 1%, ranked 1st in CS Department)	2024
Outstanding Graduate of Shanghai (Top 3%)	
<b>SenseTime Scholarship</b> (30 undergraduate AI researcher nationwide)	2023
<b>Microsoft Research “Stars of Tomorrow” Certificate</b> (Top 10% interns)	2022
Huawei Fellowship (Top 1% in honors program)	
<b>National Scholarship</b> (Top 0.2% nationwide, highest honor in China)	2021
Outstanding Undergraduate Scholarship, A Level, SJTU (Top 1%)	

## SKILLS

---

- **Skills:** Python (Pytorch), C/C++, html, css, Linux, L<sup>A</sup>T<sub>E</sub>X, Assembly language
- **Languages:** English (TOEFL 105/120), Chinese (Native)

## REFERENCES

---

- **Ming-Hsuan Yang**, Professor of EECS University of California, Merced; Research Scientist, Google Research
- **Deqing Sun**, Research Scientist, Google Research
- **Varun Jampani**, Lead Researcher, Stability AI
- **Jian-Guang Lou**, Principal Researcher, Microsoft Research
- **Shizhao Sun**, Senior Researcher, Microsoft Research
- **Yong-Lu Li**, Assistant Professor of Computer Science Shanghai Jiao Tong University