

# JUNYI ZHANG

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## EDUCATION

### Shanghai Jiao Tong University

Major in Computer Science and Technology; GPA: 3.89

Shanghai, China

Sept. 2020 - Present

### Zhiyuan College, Shanghai Jiao Tong University

Major in Zhiyuan Honors Program of Engineering (Top 5%)

Shanghai, China

Sept. 2020 - June 2024 (expected)

## SELECTED AWARDS

Microsoft Research “Stars of Tomorrow” Certificate (Top 10% interns)

2022

Huawei Fellowship (Top 1% in honors program)

2022

China National Scholarship (Top 0.2% nationwide)

2021

Undergraduate Merit Scholarship, A Level, SJTU (Top 1%)

2021

## EXPERIENCE

### Shanghai Jiao Tong University - Machine Vision and Intelligence Group

Shanghai, China

Undergraduate Research Intern

Oct. 2021 - Present

#### • Unified Human Action Understanding Project

- Research on unifying multi-modal physical action spaces (2D, 3D, image, video, etc.) to a unified semantic space through the introduction of linguistic structure knowledge.
- Design and conduct experiments to extend our method on video datasets and verify the performance.

#### • Human Action Knowledge Engine Project

- Study on improving Human-Object Interaction (HOI) detection by incorporating human action knowledge.
- Conduct experiments to examine the effect of image depth and multi-person interactions on HOI detection.
- Research results were submitted as co-author in two papers, one of which was accepted by ECCV’ 22.

### Microsoft Research Asia - Data, Knowledge and Intelligence Group

Beijing, China

Research Intern

July 2022 - Dec. 2022

#### • Diffusion Models for Layout Generation, AI for Design Project

- Study the application of diffusion models in graphic design, especially the graphic layout generation.
- Developed discrete diffusion models specific to layout data, achieved state-of-the-art performance in unconditional and conditional generation tasks for several public layout datasets.
- Research submitted as first author to top CV conference, with potential for product implementation.

## PUBLICATIONS

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

Junyi Zhang, Jiaqi Guo, Shizhao Sun, Jian-Guang Lou, Dongmei Zhang. *Under review*, 2022.

### Bridging The Isolated Islands in Human Action Understanding.

Yong-Lu Li\*, Xiaoqian Wu\*, Xinpeng Liu, Yiming Dou, Yikun Ji, **Junyi Zhang**, Yixing Li, Xudong Lu, Jingru Tan, Cewu Lu. *Under review*, 2022.

### Mining Cross-Person Cues for Body-Part Interactiveness Learning in HOI Detection.

Xiaoqian Wu\*, Yong-Lu Li\*, Xinpeng Liu, **Junyi Zhang**, Yuzhe Wu, Cewu Lu. *In ECCV*, 2022.

## SKILLS

- **Skills:** Python (Pytorch), C/C++, Linux,  $\text{\LaTeX}$ , Assembly language
- **Languages:** English (TOEFL 105/120), Chinese (Native)