# Jiazi Bu

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### Education

**BE** Shanghai Jiao Tong University, Artificial Intelligence (Guozhi Class)

Sept 2021 - June 2025

- **GPA**: 4.04/4.3; **Average Score**: 93.10/100; **Rank**: 5/95 **(TOP 5%)**.
- Languages: TOEFL iBT 105; CET4: 636; CET6: 612.
- **Skills**: Python, C++, C, LaTeX. Familiar with *PyTorch* and *Diffusers*.
- Research Interests: Generative Models (2D AIGC), Computer Vision.
- **Related Coursework:** Mathematical Analysis, Linear Algebra, Data Structure, Computer Vision, Data Mining, Reinforcement Learning.

## Experience \_\_\_\_\_

Shanghai Artificial Intelligence Laboratory, Ph.D. (Sept 2025 - ) & Research Intern

Shanghai, China Nov 2023 – Now

- Research Fields: Generative Models and Large Vision-Language Models.
- · Advisor: Prof. Dahua Lin.
- Mentor: Dr. Jiaqi Wang, Dr. Yuhang Zang and Dr. Tong Wu.

SJTU ReThinklab, Research Intern

Shanghai, China Oct 2022 – May 2024

- Research Fields: Computer Vision and AI4Science.
- · Advisor: Prof. Junchi Yan.

## Publications (\* indicates Co-First author)

#### [NeurIPS 2025] HiFlow: Training-free High-Resolution Image Generation with Flow-Aligned Guidance

*Jiazi Bu*\*, Pengyang Ling\*, Yujie Zhou\*, Pan Zhang, Tong Wu, Xiaoyi Dong, Yuhang Zang, Yuhang Cao, Dahua Lin, Jiaqi Wang Page ☑ / Paper ☑ / Code ☑

#### [CVPR 2025] ByTheWay: Boost Your Text-to-Video Generation Model to Higher Quality in a Training-free Way

Jiazi Bu\*, Pengyang Ling\*, Pan Zhang, Tong Wu, Xiaoyi Dong, Yuhang Zang, Yuhang Cao, Dahua Lin, Jiaqi Wang Paper ☑ / Code ☑

[Under Review] DiCache: Let Diffusion Model Determine Its Own Cache

*Jiazi Bu\**, Pengyang Ling\*, Yujie Zhou\*, Yibin Wang, Yuhang Zang, Tong Wu, Dahua Lin, Jiaqi Wang

Page ☑ / Paper ☑ / Code ☑

#### [ICLR 2025] MotionClone: Training-free Motion Cloning for Controllable Video Generation

Pengyang Ling\*, *Jiazi Bu*\*, Pan Zhang, Xiaoyi Dong, Yuhang Zang, Tong Wu, Huaian Chen, Jiaqi Wang, Yi Jin Page 🗹 / Paper 🗹 / Code 🗹

### [ICCV 2025] Light-A-Video: Training-free Video Relighting via Progressive Light Fusion

Yujie Zhou\*, *Jiazi Bu*\*, Pengyang Ling\*, Pan Zhang, Tong Wu, Qidong Huang, Jinsong Li, Xiaoyi Dong, Yuhang Zang, Yuhang Cao, Anyi Rao, Jiaqi Wang, Li Niu

Page ☑ / Paper ☑ / Code ☑

# [Under Review] Pref-GRPO: Pairwise Preference Reward-based GRPO for Stable Text-to-Image Reinforcement Learning (& UniGenBench proposed in this work)

Yibin Wang\*, Zhimin Li\*, Yuhang Zang\*, Yujie Zhou, *Jiazi Bu*, Chunyu Wang, Qinglin Liu, Cheng Jin, Jiaqi Wang Page ☑ / Paper ☑ / Code (Pref-GRPO) ☑ / Code (UniGenBench) ☑

# [NeurIPS 2024] Unveiling The Matthew Effect Across Channels: Assessing Layer Width Sufficiency via Weight Norm Variance

Yiting Chen, Jiazi Bu, Junchi Yan

### Paper ☑ / Code ☑

[AAAI 2024] ViTree: Single-Path Neural Tree for Step-Wise Interpretable Fine-Grained Visual Categorization

Danning Lao, Qi Liu, Jiazi Bu, Junchi Yan, Wei Shen

Paper 🗹 / Code 🖸

[SCIENCE CHINA Information Sciences] Drug-drug Interaction Prediction via Hierarchical Structure Modeling

Huaijin Wu, *Jiazi Bu*, Nianzu Yang, Yao Sun, Haitao Song, Ning Liu, Junchi Yan

Paper ☑ / Code ☑

## Projects \_

# [arXiv 2023] MetaScript: Few-Shot Handwritten Chinese Content Generation via Generative Adversarial Networks

Report ☑ / Code ☑

- Jiazi Bu\*, Qirui Li\*, Kailing Wang\*, Xiangyuan Xue\*, Zhiyuan Zhang\*
- Developed a novel Chinese content generation system that can specify styles based on Generative Adversarial Networks (GANs).
- Tools Used: Python, LaTeX.

#### DeepMovie

Poster ☑ / Code ☑

2025

- Jiazi Bu\*, Zhiyuan Zhang\*, Xizhuo Zhang\*
- Developed a plug-and-play DNN training pipeline turning most deep learning base modules into a movie recommender system.
- Tools Used: Python.

VR Pacman Code ☑

- Xiangyuan Xue, Jiazi Bu, Hanglei Zhang, Zhulin Hu, Qirui Li
- Developed a 3D first-person Pac-Man game using the Unity engine.
- Tools Used: C, C++, Unity.

SJTU Best Bachelor's Thesis (TOP 1%)

### Honors & Awards \_\_\_\_

### Ye Jun and Shen Nanpeng Outstanding Scholarship 2025 • ¥ 20000, received as one of the TOP 30 graduates of SJTU. **Zhiyuan Honors Scholarship** 2021, 2022, 2023, 2024 • ¥ 5000, received as part of the Zhiyuan Honor Program. **Guozhi Scholarship** 2022 • ¥8000, received as being in the TOP 15% of SJTU AI students. **SJTU Undergraduate Scholarship** 2022, 2023, 2024, 2025 CUMCM National First Prize (TOP 0.55%) / First Prize in Shanghai Chapter 2023 SJTU Zhiyuan Honor Bachelor's Degree 2025 **SJTU President Award** 2023 • Received for serving as a student volunteer during the COVID-19 pandemic. **SJTU Outstanding Freshman Training Camp Member** 2021 **SJTU Outstanding Graduate** 2025