# Jiazi Bu

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## **Education**

**B.E.** Shanghai Jiao Tong University, Artificial Intelligence (*GuoZhi Class Programme*)

- GPA: 4.04/4.3; Average Score: 93.10/100; Rank: 5/95 (TOP 5%).
- Languages: TOEFL iBT 105 (R:29, L:27, S:23, W:26); 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 (A+), Linear Algebra (A), Data Structure (A+), Data Mining (A+), Algorithm Design and Analysis (A+), Deep Learning (A+), Computer Vision (A-), Reinforcement Learning (A+).

Shanghai, China Sept 2021 – June 2025

# **Experience** \_

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

• Research Fields: Generative Models and Large Vision-Language Models.

Shanghai, China Nov 2023 – Now

- · Advisor: Prof. Dahua Lin.
- Mentor: Dr. Jiaqi Wang, Dr. Yuhang Zang and Dr. Tong Wu.

**SJTU ReThinklab**, *Undergraduate* Research Assistant

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

Shanghai, China Oct 2022 – May 2024

# 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 Page ☑ / 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] G<sup>2</sup>RPO: Granular GRPO for Precise Reward in Flow Models

Yujie Zhou\*, Pengyang Ling\*, *Jiazi Bu*\*, Yibin Wang, Yuhang Zang, Jiaqi Wang, Li Niu, Guangtao Zhai Page ☑ / Paper ☑ / Code ☑

#### [Under Review] UniGenBench++: A Unified Semantic Evaluation Benchmark for Text-to-Image Generation

Yibin Wang\*, Zhimin Li\*, Yuhang Zang\*, Jiazi Bu, Yujie Zhou, Chunyu Wang, Qinglin Liu, Cheng Jin, Jiaqi Wang

#### 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 ☑

[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 🖸

Poster 🗹 / 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

- 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.

## **Honors & Awards**

Ye Jun and Shen Nanpeng Outstanding Scholarship • ¥ 20000, received as one of the TOP 30 graduates of SJTU.	2025
<ul> <li>Zhiyuan Honors Scholarship</li> <li>¥ 5000 per year, received as part of the SJTU Zhiyuan Honors Programme.</li> </ul>	2021, 2022, 2023, 2024
<ul> <li>Guozhi Scholarship</li> <li>¥ 8000, received as being in the TOP 15% of SJTU AI students.</li> </ul>	2022
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
• Received for serving as a student volunteer during the COVID-19 pandemic.	2023
SJTU Outstanding Freshman Training Camp Member	2021
SJTU Outstanding Graduate	2025
SJTU Best Bachelor's Thesis (TOP 1%)	2025