Jiazi Bu

bujiazi001@sjtu.edu.cn (+86) 139 9552 3308 bujiazi.github.io Bujiazi

Education

B.S. **Shanghai Jiao Tong University (SJTU)**, Artificial Intelligence (GuoZhi Class) — Shanghai, China, 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 (A+), Linear Algebra (A), Data Structure (A+), Data Mining (A+), Algorithm Design and Analysis (A+), Deep Learning (A+), Computer Vision (A-), Reinforcement Learning (A+).

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

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[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

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[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

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[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

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[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

- ***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.

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

SJTU Best Bachelor's Thesis (TOP 1%) — 2025