

# 杜毅衡 Yiheng Du

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## Education

- **Peking University** Sept 2026 – (expected)  
M.S. in *Computer Science and Technology*  
Research Focus: AIGC, Image Editing, Style Transfer, Video Understanding and Generation
- **Sichuan University** Sept 2022 – Jun 2026 (expected)  
B.S. in *Computer Science and Technology*

## Experience

**Research Intern** 2025.03 – *Peking University VILLA Lab* · *AIGC*

- We propose  **AlignedGen** a training-free approach to align style across multiple generated images while preserving text-image alignment, improving style consistency for multi-image generation. First author; led core method/architecture design, implemented the pipeline, and drove main experiments for submission.

**Research Intern** 2025.03 – *Peking University VILLA Lab* · *Audio–Vision Segmentation*

- In collaboration with THU IVG Lab, I co-authored  **DDAVS**, an audio-semantic disentangled Audio–Visual Segmentation model that improves discriminability and robustness via learnable queries, an audio prototype memory bank, and contrastive learning, achieving new SOTA on AVSBench (+1.7%) and VPO (+3.54%). I led the core method design and end-to-end implementation, and conducted major experiments to support submission.

**Research Intern** 2024.08 – 2025.02 *Ant Group* · *Data Intelligence Platform & Services Department* · *Systems*

- We study  **DLRover-RM** an elastic cloud training system for large-scale deep recommendation models, enabling efficient and reliable training under resource volatility via fast checkpointing and fault-tolerant recovery (31% faster job completion, +20% memory utilization). I designed and implemented *Flash-checkpoint* and conducted *Auto Accelerate* experiments and analysis.

## Publications (\* denotes equal contribution)

-  **AlignedGen: Aligning Style Across Generated Images**, *NeurIPS 2025 (CCF-A)*  
Jiexuan Zhang\*, **Yiheng Du\***, Qian Wang, Weiqi Li, Yu Gu, Jian Zhang.
-  **DDAVS: Disentangled Audio Semantics and Delayed Bidirectional Alignment for Audio–Visual Segmentation**, Under Review  
Jingqi Tian, **Yiheng Du**, Haoji Zhang, Yuji Wang, Isaac Ning Lee, Xulong Bai, Tianrui Zhu, Jingxuan Niu, Yansong Tang.
-  **DLRover-RM: Resource Optimization for Deep Recommendation Models Training in the Cloud**, *VLDB 2024 (CCF-A)*  
Qinlong Wang\*, Tingfeng Lan\*, Yinghao Tang, Bo Sang, Ziling Huang, **Yiheng Du**, Haitao Zhang, Jian Sha, Hui Lu, Yuanchun Zhou, Ke Zhang, Mingjie Tang.

## Awards

- **Gold Medal**, International Collegiate Programming Contest (ICPC) 2022
- Bronze Medal, International Collegiate Programming Contest East Asia Regional Final (ICPC-EC Final) 2023
- **Gold Medal**, CCF Collegiate Computer Systems and Programming Contest (CCSP) 2023
- **Gold Medal**, ICPC China Sichuan Provincial Contes (2nd place in 2024; 3rd place in 2023 & 2022)
- Bronze Medal, National Olympiad in Informatics (NOI) 2021
- Silver Medal, Asia-Pacific Informatics Olympiad (APIO) 2021

## Skills

- **Programming:** C/C++, Python, Java
- **Machine Learning:** PyTorch, Transformers, Diffusion Models, Flow Matching, LLM, Reinforcement Learning
- **Systems:** Linux, Docker, Kubernetes, Distributed Systems, Databases