Kaiwen Zhang

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🎓 Education

Tsinghua University, Beijing, China   Sep. 2021 - Present

Bachelor student in Computer Science and Technology (GPA: **3.95/4.0**, **Top 5%**)

Selected courses of A+/A: Fundamentals of Programming, Introduction to Artificial Intelligence, Artificial Neural Networks, Fundamentals of Computer Graphics, Principles of Signal Processing, Introduction to Computer Systems, Software Engineering, Data Structures, Calculus, Linear Algebra, Probability and Statistics

📄 Publications

Research interests: Computer Vision, Generative Models, Deep Learning, and Neural Rendering.

- **Kaiwen Zhang**, Yifan Zhou, Xudong Xu, Xingang Pan* and Bo Dai.
  DiffMorpher: Unleashing the Capability of Diffusion Models for Image Morphing *CVPR 2024*
  Project / ArXiv / Code (*200+ stars*) / Huggingface Demo (*Corresponding Author)

♡ Honors and Awards

National Scholarship (**Highest** honor for undergraduates in China, ∼ **Top 0.2%**)	Oct. 2023
Second Prize (3 / 109), The Jittor AI Challenge (Image Generation Track)	Sept. 2023
Tsinghua University Comprehensive Excellence Scholarship (**Top 5%** undergraduates)	Oct. 2022
Meritorious Winner (Top 10%), American Mathematical Contest in Modeling	Mar. 2022

👥 Experience

Intelligent Digital Creation Group, Shanghai AI Lab   Jul. 2023 - Present

Research Intern   Primary Advisor: Prof. Xingang Pan @ NTU MMLab (Remotely)

- Conduct research on image morphing based on diffusion models.
- Propose novel algorithms to enhance rationality and smoothness in real image interpolations, which exhibit excellent performance that **surpasses all existing methods by a large margin**.
- **Paper is accepted by CVPR 2024 (Rating: 5 5 4)**. The reviewers commend the paper for its impressive results, appreciating the method's simplicity and elegance.

Knowledge Engineering Group, THU   Sep. 2022 - Jun. 2023

Research Assistant   Advisor: Prof. Jie Tang

- Design, implement and train a Variational Autoencoder specific to video data.
- Implement *Pix2Video: Video Editing using Image Diffusion* based on the Stable Diffusion model.
- Implement *Prompt-to-Prompt Image Editing with Cross-Attention Control* in the latent space.

Student Association of Science and Technology, THU CST   Aug. 2022 - Aug. 2023

Core member

- Serve as a summer training instructor for computer vision and generation models in AI track. Here is the website, the handout and the project designed by me.

⚙ Skills & Misc

- Programming: Python (including PyTorch), C/C++, LATEX, TypeScript (React), R
- Language: English (fluent, with *TOFLE 102*), Chinese (native)