

KAIWEN ZHANG

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🎓 EDUCATION

Tsinghua University, Beijing, China

Sep. 2021 - Present

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

📖 RELEVANT COURSEWORK

- Fundamentals of Programming (A+)
- Introduction to Computer Systems (A+)
- Introduction to Artificial Intelligence (A)
- Fundamentals of Computer Graphics (A)
- Software Engineering (A)
- Data Structures (A)
- Principles of Computer Networks (A)
- Discrete Mathematics I & II (A)
- Programming Training (A)
- Calculus A I & II (A)
- Linear Algebra (A)
- Probability and Statistics (A)

👥 WORKING 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.
- Design a video neural representation that can represent detailed image features and consistent motions over time.
- Propose novel algorithms to enhance rationality and smoothness in real image interpolations, which exhibit excellent performance in numerous real-world cases excelling existing methods.
- Develop a UI system that allows users to input real pictures for natural interaction.
- **Paper is submitted to CVPR 2024 as the first author.**

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 Stable Diffusion model.
- Implement *Prompt-to-Prompt Image Editing with Cross-Attention Control* in the latent space.
- Explore introducing optical flow into video diffusion models and combining image models and video models to improve the time consistency in video generation.
- Participate in developing UI system and conducting user study for *CogVideo*.

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.

♡ 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