

Zhanhe Shi

New York University

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Education

New York University

Master of Science in Information Systems (MSIS)

New York, NY, USA

Sep 2025 - Present

- **GPA:** 4.0/4.0
- **Courses:** Fundamental Algorithms, Data Communications & Networks, Data Science & AI for Business
- **In Progress:** Deep Learning, Database Systems, The Global Economy

ShanghaiTech University

School of Information Science and Technology, Bachelor of Computer Science and Technology

Shanghai, China

Sep 2021 - Jun 2025

- **Courses:** Machine Learning, Econometric Analysis Methods and Modeling, Mathematical Modeling
- **Honors & Awards:** Outstanding Student, 2023-2024

University of California, Berkeley

College of Engineering, Berkeley Extension Global Exchange Program, Computer Science

Berkeley, CA, USA

Aug 2023 - May 2024

- **Courses:** Designing, Visualizing and Understanding Deep Neural Networks, Intro to Computer Vision and Computational Photography

Internship Experience

Hunsun Technologies Inc.

Intern, Junior Software Engineer

Hangzhou, Zhejiang, China

May 2024 - Jul 2024

- Conducted research on existing major datasets and related models for document layout analysis.
- Evaluated the accuracy and performance of several open-source models on the Chinese dataset CDLA.
- Retrained LayoutLMv3, YOLO, and VGT models, comparing their performance and accuracy.

Research & Project Experience

Multiple Human-Object Interaction Generation with Conditional Diffusion

Shanghai, China

Personal Project

May 2025

- Proposed a generation framework for multiple human-object interaction, combining a temporal Transformer with a conditional diffusion model.
- Incorporated PointNet++ object point-cloud encoding and a discrete quantity encoder to inject geometry and entity-count priors.
- Implemented an AdaLN-Zero modulated temporal fusion Transformer to condition feature normalization on diffusion timesteps.

HOI-M3 : Capture Multiple Humans and Objects Interaction within Contextual Environment

Shanghai, China

Third Author, Frontier Science Research Base on Intelligent Human-Machine Collaboration and Interaction

Aug 2023 - Mar 2024

- Assisted in capturing a multi-human multi-object interaction dataset.
- Used the Segment Anything Model to annotate and track masks for people and objects.
- Employed ViTPose to detect single-view human body keypoints and performed multi-view matching to optimize the human body SMPL model.
- Accepted by CVPR 2024 (Highlight). (arXiv:2404.00299v2 [cs.CV] 2 Apr 2024)

FGSM-Based Attack on SAM Model

Berkeley, CA, USA

Team Leader, University of California, Berkeley

Apr 2024

- Implemented FGSM (Fast Gradient Sign Method) to attack SlimSAM model and generate adversarial samples.
- Conducted quantitative evaluations of adversarial attacks on SlimSAM by calculating mIoU between original and adversarial masks.
- Developed a Gradio-based web interface to support image uploads and visualize attack masks based on selected weights.

3D Character Generation Using ControlNet and LoRA

Berkeley, CA, USA

Team Member, University of California, Berkeley

Nov 2023 - Dec 2023

- Used LoRA to fine-tune the existing text-to-image diffusion model, enhanced the consistency of characters features.
- Combined ControlNet with 3D human pose solution, controlled the spatial consistency in multi-view images through depth and key points.
- Generated 3D character models using Gaussian splatting.

Skills

Programming Python (NumPy, Matplotlib, PyTorch, OpenCV), C/C++, MATLAB

Miscellaneous Linux, \LaTeX , Microsoft Office, Git, Tencent Cloud, Simulation of Urban Mobility, Wind, Blender