Zhanhe Shi

New York University

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Education

New York University — *New York, NY, USA*

Master of Science in Information Systems (MSIS) — *Sep 2025 - Present*

- **GPA**: N/A (First Semester)
- **Description:** Joint program between the Courant (GSAS) and the Stern School of Business, combining computer science and business courses.

ShanghaiTech University — *Shanghai, China*

School of Information Science and Technology, Bachelor of Computer Science and Technology — *Sep 2021 - Jun 2025*

- **GPA**: 3.38/4.0
- **Courses:** Machine Learning, Econometric Analysis Methods and Modeling, Mathematical Modeling
- **Honors & Awards:**
  Outstanding Student, 2023-2024
  Outstanding Award in the First Admissions Promotion Project Competition at ShanghaiTech University in 2022
  Outstanding Individual in Undergraduate Social Practice at ShanghaiTech University in 2022

University of California, Berkeley — *Berkeley, CA, USA*

College of Engineering, Berkeley Extension Global Exchange Program, Computer Science — *Aug 2023 - May 2024*

- **GPA**: 3.83/4.0
- **Courses:** Designing, Visualizing and Understanding Deep Neural Networks, Intro to Computer Vision and Computational Photography

Internship Experience

Hundsun Technologies Inc. — *Hangzhou, Zhejiang, China*

Intern, Junior Software Engineer — *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

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. (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.

Neural Radiance Field Implementation Based on Multilayer Perceptron — *Berkeley, CA, USA*

Personal Project, University of California, Berkeley — *Nov 2023*

- Built a Multilayer Perceptron (MLP) model to generate 3D object models from 2D multi-view object images.
- Restored the projection relationship of images in the world coordinate system by utilizing given camera parameters and spatial information.
- Developed and trained a residual neural network model using PyTorch, leveraging voxel-based rendering to reconstruct 3D object models.

Skills

Programming	Python (NumPy, Matplotlib, Pytorch, OpenCV), C/C++, MATLAB
Miscellaneous	Linux, LaTeX, Microsoft Office, Git, Tencent Cloud, Simulation of Urban Mobility, Wind, Blender