Zeyu Cai

Hangzhou, China

📱 (86) 19557152028   ✉ caizeyu010612@gmail.com   ⊙ https://zcai0612.github.io/

Education

- **Nanjing University**   **Suzhou, China**
  Ph.D. Computer Science and Technology (**Supervisor:** Prof. Zhenyu Zhang)   *August 2025 –*

- **The Hongkong University of Science and Technology (Guangzhou)**   **Guangzhou, China**
  M.Phil. Artificial Intelligence (**Supervisor:** Prof. Zeyu Wang, **GPA:** 3.867/4.0)   *August 2023 – July 2025*

- **Nanjing University of Aeronautics and Astronautics**   **Nanjing, China**
  B.S. Computer Science and Technology (**GPA:** 4.0/5.0)   *August 2019 – June 2023*

Selected Publications

- **Zeyu Cai**, Ziyang Li, et al. **UP2You: Fast Reconstruction of Yourself from Unconstrained Photo Collections**, *ICLR 2026.*

- Bingyuan Wang, Hengyu Meng, Rui Cao, **Zeyu Cai**, et al. **MagicScroll: Nontypical Aspect-Ratio Image Generation for Visual Storytelling via Multi-Layered Semantic-Aware Denoising**, *IEEE VR 2025*.

- Duotun Wang*, Hengyu Meng*, **Zeyu Cai***, et al. **HeadEvolver: Text to Head Avatars via Locally Learnable Mesh Deformation**, *3DV 2025 Oral*. (* means equal contribution)

- **Zeyu Cai**, Duotun Wang, et al. **DreamMapping: High-Fidelity Text-to-3D Generation via Variational Distribution Mapping**, *Pacific Graphics 2024*.

- Boqian Li, Haiwen Feng, **Zeyu Cai**, Michael J. Black, Yuliang Xiu. **ETCH: Generalizing Body Fitting to Clothed Humans via Equivariant Tightness**, *ICCV 2025 Highlight*.

- Xiaokun Sun, **Zeyu Cai**, et al. **StrandHead: Text to Strand-Disentangled 3D Head Avatars Using Hair Geometric Priors**, *ICCV 2025*.

- Lanjiong Li*, Guanhua Zhao*, Lingting Zhu*, **Zeyu Cai**, et al. **AssetDropper: Asset Extraction via Diffusion Models with Reward-Driven Optimization**, *SIGGRAPH 2025*.

Research Experience

Transformer for Weakly Supervised Semantic Segmentation   **April 2022 - June 2023**
Advisor: Prof. Pan Gao

- Applying image-level labels to produce the pixel-level labels with the proposed method of multi-scale Class Activation Maps (CAMs); Conducting semantic Segmentation training based on the produced pseudo pixel-level labels.
- Using a weight-sharing transformer to realize an end-to-end training.
- Find new approaches to generating high-quality pseudo labels.

Text-to-3D Head Avatar Generation   **January 2023 - February 2024**
Advisor: Prof. Zeyu Wang & Dr. Xiaohang Zhan

- Introduce per-triangle weighted Jacobians to add fine-grained deformation over parts of the template mesh while keeping semantic facial features.
- Improve the quality of avatar generation and reduce the distortion of avatar animation.
- Paper has been accepted by 3DV 2025 as Oral paper.

Improved Score Distillation Sampling for Text-to-3D generation   **February 2024 - May 2024**
Advisor: Prof. Zeyu Wang & Dr. Xiaohang Zhan

- Introduce a novel framework, DreamMapping, to efficiently generate 3D contents from textual descriptions.

- Propose a variational distribution mapping and distribution coefficient annealing method to improve the original loss of score distillation sampling (SDS).
- Paper has been accepted by Pacific Graphics 2024.

Internship Experience

Zhejiang Lab   **May 2024 - July 2024**
Large-scale borderless 3D scene generation

vivo   **January 2025 - April 2025**
Efficient diffusion models for mobile real-time text-to-image generation.

Westlake University   **April 2025 -**
SMPL-X fitting of 3D human; 3D avatar generation from unconstrained photos.

IROOTech   **December 2025 -**
3D human generation and perception.

Research Interests

AIGC: Text to Image/3D Generation, ID-Driven Generation, Multi-Modal Generation.
3D Avatar: 3D Avatar Generation, Pose Estimation, Template Fitting.