

Yi-Chuan Huang

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EDUCATION

National Yang Ming Chiao Tung University (NYCU)

Ph.D. Candidate in Computer Science

Hsinchu, Taiwan

Sep. 2023 – Present

Advisor: Yu-Lun Liu | **GPA:** 3.99/4.3

Selected Coursework: Deep Learning, Optimization Algorithms, Machine Learning for Signal Processing, Edge AI.

National Yang Ming Chiao Tung University (NYCU)

M.S. in Applied Art

Hsinchu, Taiwan

Sep. 2021 – Jun. 2023

Thesis: *Personalized Chinese Handwriting Font Synthesis Method*

RESEARCH INTERESTS

3D Vision, Multi-View Reconstruction, Procedural 3D Generation, Neural Rendering, and Generative Models.

PUBLICATIONS & PREPRINTS

Voxify3D: Pixel Art Meets Volumetric Rendering

Yi-Chuan Huang, Jie-Wen Chan, Hao-Jen Chien, Yu-Lun Liu.

CVPR 2026. A differentiable two-stage framework for converting 3D meshes into voxel art through multi-view pixel-art supervision, discrete palette control, and CLIP-guided optimization.

Project: <https://yichuanh.github.io/Voxify-3D/>

InfiniDream: Open-Ended Photorealistic 3D Worlds through Procedural Generation

Yi-Chuan Huang, Hao-Jen Chien, Zheng-Hui Huang, Yu-Lun Liu, Kaipeng Zhang, Zhixiang Wang.

arXiv 2026. A VLM-driven framework for generating photorealistic 3D worlds from text through scene planning and procedural code editing, with diverse scene variants generated by varying random seeds.

Project: <https://yichuanh.github.io/infinidream-page/>

GaMO: Geometry-aware Multi-view Diffusion Outpainting for Sparse-View 3D Reconstruction

Yi-Chuan Huang, Hao-Jen Chien, Chin-Yang Lin, Yin-Huan Chen, Yu-Lun Liu.

arXiv 2026. A geometry-aware multi-view diffusion outpainting method that expands the field of view of sparse input images to support consistent 3D reconstruction.

Project: <https://yichuanh.github.io/GaMO/>

Splannequin: Freezing Monocular Mannequin-Challenge Footage with Dual-Detection Splatting

Hao-Jen Chien, Yi-Chuan Huang, Chung-Ho Wu, Wei-Lun Chao, Yu-Lun Liu.

WACV 2025. A method for recovering static 3D scenes from monocular Mannequin-Challenge videos by anchoring unstable dynamic Gaussian splats to reliable temporal states.

Project: <https://chien90190.github.io/splannequin/>

AuraFusion360: Augmented Unseen Region Alignment for Reference-based 360° Unbounded Scene Inpainting

Chung-Ho Wu, Yang-Jung Chen*, Ying-Huan Chen, Jie-Ying Lee, Bo-Hsu Ke, Chun-Wei Tuan Mu, Yi-Chuan Huang, Chin-Yang Lin, Min-Hung Chen, Yen-Yu Lin, Yu-Lun Liu.*

CVPR 2025. A framework combining diffusion priors and depth-aware 3D Gaussian Splatting for geometrically consistent object removal and inpainting in 360° unbounded scenes.

Project: <https://kkennethwu.github.io/aurafusion360/>

RESEARCH EXPERIENCE

Alaya Lab, Shanda AI Research Tokyo

Research Intern

Tokyo, Japan

Jul. 2026 – Present

Research on VLM-guided procedural 3D world generation, including text-driven scene planning and procedural code editing, with Zhixiang Wang.

SELECTED PROJECTS

Knowledge Distillation for Compact Large Language Models (*Code*)

Implemented knowledge distillation from LLaMA-3.2-3B-Instruct to LLaMA-3.2-1B-Instruct using KL-divergence and MSE losses on WikiText-2.

Layered Vectorization of Natural Images for Editable SVG Graphics (*Code*)

Converted natural images into layered, editable SVG graphics using structure-preserving decomposition for AI-assisted design.

ACADEMIC SERVICE & HONORS

Reviewer: ICLR, IEEE TPAMI, Pacific Graphics

Teaching Assistant: Image and Video Generation, NYCU

Sep. 2025

Outstanding Teaching Assistant: Signals and Systems, NYCU

Sep. 2024

TECHNICAL SKILLS

Python, C/C++, JS/HTML, PyTorch, OpenCV, Open3D, Blender, COLMAP, OpenGL, Unity, Linux, CUDA (basic).