

Chin-Yang Lin

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Education

Master

Institute of Data Science and Engineering

Advisor: Prof. [Yu-Lun Liu](#) and Prof. [Wei-Chen Chiu](#)

Course: Advances in 3D Vision, Image Processing, Machine Learning, Deep Learning and Practice

National Yang Ming Chiao Tung University
2023 – Present

Bachelor

Double Major in Computer Science and Geomatics

National Cheng Kung University
2018 – 2023

Publications

Fast convergence Few-shot NeRF

[Chin-Yang Lin](#), [Chung-Ho Wu](#), [Chang-Han Yeh](#), [Shih-Han Yen](#), [Cheng Sun](#), [Yu-Lun Liu](#)

3D scene reconstruction from few input images. Achieved state-of-the-art quality, while also demonstrating faster training times and did not require any learned priors.

Under review at ECCV 2024

Boosting Generalizable NeRF

[Chih-Hai Su](#), [Chih-Yao Hu](#), [Shr-Ruei Tsai](#), [Jie-Ying Lee](#), [Chin-Yang Lin](#), [Yu-Lun Liu](#)

Enhanced MVS-based NeRFs to improve generalizable rendering quality, achieving state-of-the-art results in large-scale scenes.

Under review at SIGGRAPH 2024

A CNN-Speed-Based GNSS/PDR Integrated System for Smartwatch

[Chin-Yang Lin](#), [Yang-En Lu](#), [Chi-Hsin Huang](#), [Kai-Wei Chiang](#)

We propose a GNSS/PDR fusion algorithm tailored for smartwatches, tracking sensor roll and pitch variations due to hand swings, and integrating a CNN model for 1-D speed prediction and ZUPT detection.

MMT 2023

Research In Progress

Pose-Graph Optimization on 3D Gaussian Splatting

Advisor: Prof. [Yu-Lun Liu](#)

Proposing pose-graph optimization for unposed 3D reconstruction that improves camera poses and quality.

2023

Temporal-Consistent Video Restoration with Diffusion Model (MediaTek Project)

Advisor: Prof. [Yu-Lun Liu](#)

Proposing a zero-shot temporal-consistent enhancement module for diffusion-based image restoration.

2023

Projects

Zero-shot Water Segmentation

NYCU Digital Image Processing (1st Water Segmentation Challenge)

Boosting zero-shot CLIP segmentation with the fast bilateral solver. Achieving up to 0.90 mIoU on the test set surpasses other methods involving training or fine-tuning.

Sep. 2023 - Jan. 2024

FS-NeRF: Fast Sparse Input Neural Radiance Field

NYCU Deep Learning and Practice (Final project the highest score)

Achieving fast convergence of high-quality NeRF with only two input images by utilizing voxel representation and integrating visibility priors and monocular depth, reducing the training time by 30x.

Jul. 2023 - Aug. 2024

Industrial Robot Controller

Independent Study, Advisor: Prof. [Jenn-Jier Lien](#)

An automated industrial robot, including 3D Lidar navigation and obstacle avoidance, real-time patient face recognition, robot arm gripping, and pedestrian following using YOLO and Depth image.

Sep. 2021 - Jun. 2022

Integration of V-SLAM and LiDAR point cloud registration based on smartphone

Independent Study, Advisor: Prof. [Kai-Wei Chiang](#)

A low-cost navigation system that integrates Visual SLAM and visual point cloud registration with pre-build 3D LiDAR map, significantly reducing trajectory drift and improving accuracy by 65%.

Feb. 2020 – Jan. 2021

Awards

National Science Council College Student Research Scholarship

2021 – 2022

Technical Skills

Programming

C, C++, Python, Shell Script, HTML

Tools

Git, Linux, OpenCV, PyTorch, TensorFlow, CUDA, ROS