

EDUCATION

- **National Yang Ming Chiao Tung University (NYCU)** Taipei, Taiwan
B.S. in Medicine and Computer Science (Double Major) Sep 2022 – June 2028

EXPERIENCE

- **Dcard** Taipei, Taiwan
Machine Learning Intern July 2023 - Dec 2023
 - **Article Recommendation:** Optimized article recommendation system with model architecture redesign and user behavior observation, improved CTR by 30%
 - **Distribution Discrepancy:** Addressed differences between offline and online data distributions using diverse sampling technique, anomaly detection, continuous learning, etc
 - **MLOps:** Built end-to-end MLOps workflow and data transformation pipeline with Circle CI and Airflow on GCP.
 - **Database Migration:** Migrated PostgreSQL database + ANN Index Tree for embedding search with Milvus and improve search time by 10x and performance (CTR / PV) by 10%
- **NTHU, Sensing and Photocatalysis Nanomaterials Laboratory** Hsinchu, Taiwan
Research Assistant Oct 2022 - Present
 - **Model Development:** Developed real-time prediction models for hazardous gas (NO_2 O_3) concentration estimation, including Transformer-based architectures, statistical time-series models, and tree-based ensemble methods.
 - **On-Device Deployment:** Deployed Transformer-based model on Android Phone for real-time prediction with quantization.
 - **Awards:** 20th National Innovation – Academic Creation Award
- **Academia Sinica** Taipei, Taiwan
Summer Research Intern, Research Assistant July 2023 - Aug 2024
 - **Stylizing Radiance Field:** Studied stylizing NeRFs with text with real-time inference in a feed-forward manner as opposed to previous methods where per-scene optimization is needed.
 - **Low-Level Vision:** Proposed a novel deformation field formulation for super-resolution and image compression tasks with state-of-the-art performance, accepted by NeurIPS 2025 main conference.
- **NTHU, Institute of Learning Sciences and Technologies** Hsinchu, Taiwan
Research Assistant October 2022 - April 2023
 - **Sentimental Text Generation:** Developed and trained artistic image to sentimental text generation model with CLIP and GPT-2 on Artemis dataset.
 - **Latent Space:** Bridged latent space discrepancy between CLIP ViT and GPT with novel embedding transformation adapters.

PROJECTS & PUBLICATIONS

- **FIPER: Factorized Features for Robust Image Super-Resolution and Compression:**
Yang-Che Sun, Cheng Yu Yeo, Ernie Chu, Jun-Cheng Chen, Yu-Lun Liu. NeurIPS 2025
 A novel learnable basis-coefficient representation that uses multi-level frequency decomposition to reconstruct fine details in images. Achieved state-of-the-art performance on image super-resolution and image compression tasks.
National Science and Technology Council (NSTC) Research Project
- **3AM: 3segment Anything with Geometric Consistency in Videos:**
Yang-Che Sun, Cheng Sun, Chin-Yang Lin, Fu-En Yang, Min-Hung Chen, Yen-Yu Lin, Yu-Lun Liu. In submission.
 Integrated 3D-aware features with novel sampling paradigm during training for tracking object consistently in videos where previous 2D-based and 3D-based methods either fails on large camera variation or requires ground-truth poses and depths.
- **ETHTaipei:**
 - **ETHTaipei 2023:** Autopass: Revolutionized fare payment by enabling drivers to use cryptocurrency as a option, and guaranteed safety for owners.
 - **ETHTaipei 2024:** ETHPaymaster: Built decentralized paymaster with account abstraction for democratized self-control.
 - **ETHTaipei 2025:** Lease Notary: Transit paper-based rental agreements onto the blockchain as Lease contract.
- **Helmet Detection App:** An on-device app for detecting workers in construction site with or without wearing helmet correctly and subsequently notifying managements. Used YOLOv5 for finetuning and deployment to android phone with CI/CD.
Second Place in Maichu Hackathon 2023