

Kang-Yang Huang

COMPUTER VISION · ARTIFICIAL INTELLIGENCE · MULTIMODAL LEARNING

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Summary

Kang-Yang Huang is pursuing a Ph.D. at the intersection of [Computer Vision](#) and [Multimodal Learning](#), with the goal of building **resilient and efficient AI systems**. He received his Master's degree in [Computer Science](#) from [National Taiwan University \(NTU\)](#) in July 2025, where he was a member of the [AIMM](#) group in [CMLab](#), advised by Prof. [Wen-Huang Cheng](#) and Prof. [Hong-Han Shuai](#). His research traces a path from lightweight Deep Learning toward [Generative AI \(GenAI\)](#) and multimodal understanding, spanning text-to-image generation, image editing, and [Vision-Language Models \(VLMs\)](#). His work has been recognized with the [Hon Hai Technology Award](#), the [NTU Lam Research Paper Award](#) and [Outstanding Student Scholarship](#), and he is a member of the [Phi Tau Phi Scholastic Honor Society](#) for distinction in the Department of EECS.

Education

National Taiwan University (NTU)

Taipei, Taiwan

M.S. IN COMPUTER SCIENCE

Feb. 2023 - Jul. 2025

- Advisor: Prof. [Wen-Huang Cheng](#) & Prof. [Hong-Han Shuai](#)
- [Hon Hai Technology Award](#), [NTU Lam Research Paper Award](#) and [Outstanding Student Scholarship](#)
- Member of the [Phi Tau Phi Scholastic Honor Society](#)
- GPA: 4.2/4.3; Average score: 96/100; Rank: 5/51
- Master Thesis: Multimodal Interpretable Deepfake Detection Benchmark for MLLM

National Yang Ming Chiao Tung University (NYCU)

Hsinchu, Taiwan

B.S. IN UNDERGRADUATE HONORS PROGRAM OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Sep. 2017 - Sep. 2021

- Exchange student at [RWTH Aachen University](#) (Germany) from Apr. to Sep. in 2021
- [Academic Achievement Award](#) in 2020 Fall Semester
- Member of the varsity Badminton team at NYCU.

Publications (Selected)

Conference Proceedings

- [K.-Y. Huang*](#), L. Zou*, J.-Y. Jiang-Lin*, L. Lo, S.-P. Yang, Y.-W. Tseng, K.-H. Lin, C.-L. Chen, Y.-T. Ta, Y.-T. Wang, P.-C. Chen, H. Xie, H.-H. Shuai, and W.-H. Cheng. "TriDF: Evaluating Perception, Detection, and Hallucination for Interpretable DeepFake Detection" [IEEE/CVF Conference on Computer Vision and Pattern Recognition \(CVPR\)](#), 2026. Poster Presentation [[Paper](#), [Project Page](#)]
- [K.-Y. Huang*](#), J.-Y. Jiang-Lin*, L. Lo, Y.-N. Huang, T. Lin, J.-C. Wu, H.-H. Shuai, and W.-H. Cheng. "ReCorD: Reasoning and Correcting Diffusion for HOI Generation." [ACM International Conference on Multimedia \(MM\)](#), 2024. Poster Presentation [[Paper](#), [Project Page](#)]
- K.-H. Lin, Y.-W. Tseng, [K.-Y. Huang](#), J.-C. Wu, and W.-H. Cheng. "InstructFLIP: Exploring Unified Vision-Language Model for Face Anti-spoofing." [ACM International Conference on Multimedia \(MM\)](#), 2025. Oral Presentation [[Paper](#), [Project Page](#)]
- L. Xue, [K.-Y. Huang](#), R. Chao, J.-C. Wu, H.-H. Shuai, Y.-H. Li, and W.-H. Cheng. "Learning Efficient Interaction Anchor for HOI Detection." [IEEE International Conference on Multimedia and Expo \(ICME\)](#), 2024. Oral Presentation [[Paper](#)]
- C.-H. Wang, [K.-Y. Huang](#), J.-C. Chen, H.-H. Shuai, and W.-H. Cheng. "Heterogeneous Federated Learning through Multi-branch Network." [IEEE International Conference on Multimedia and Expo \(ICME\)](#), 2021. Poster Presentation [[Paper](#)]

Journal Articles

- C.-H. Wang, [K.-Y. Huang](#), Y. Yao, J.-C. Chen, H.-H. Shuai, and W.-H. Cheng. "Lightweight Deep Learning: An Overview." [IEEE Consumer Electronics Magazine \(IEEE MCE\)](#), 2024. [Best Paper Awards](#) [[Paper](#)]
- L. Zou, [K.-Y. Huang](#), Y.-W. Tseng, L. Lo, J. Sanchez-Riera, J.-C. Wu, H.-H. Shuai, and W.-H. Cheng. "BAB-VAD: Breaking Ambiguity Barriers in Fine-Grained Video Anomaly Detection." [Submitted to top-tier international computer vision journal](#), 2026.

Work Experience

Research Assistant

Hsinchu, Taiwan

ARTIFICIAL INTELLIGENCE AND MULTIMEDIA (AIMM) LABORATORY, NATIONAL YANG MING CHIAO TUNG UNI.

Oct. 2022 - Jan. 2023

- Advised by Prof. [Wen-Huang Cheng](#)
- Developed [LLMs](#) and [GenAI](#) models for Taiwan's top E-commerce enterprise, deploying customer-centric precision marketing on the official APP by analyzing browsing and purchase history to deliver customized advertisements, achieving a [50% CTR increase](#).

Research Assistant

Taipei, Taiwan

RESEARCH CENTER FOR INFORMATION TECHNOLOGY INNOVATION (CITI), ACADEMIA SINICA

Jul. 2020 - Jul. 2021

- Advised by Dr. [Jun-Cheng Chen](#)
- Study heterogeneous [Federated Learning](#), [AI security](#): adversarial attack and defense, and [Model Compression](#): Knowledge Distillation.

Projects

Multimodal Interpretable Deepfake Detection

National Taiwan Uni.

SUPPORTED BY **NVIDIA** ACADEMIC GRANT PROGRAM

Apr. 2025 - Present

- Assess the [perception](#) and [interpretation detection](#) capabilities of mainstream MLLMs, along with [hallucination tendencies](#).
- Led the research team by scheduling timelines and optimizing task allocation based on member strengths, fostering a collaborative environment that accelerated project delivery.
- Design [MLLMs](#) against malicious usage of generative AI.
- Accepted to [CVPR](#) 2026.

Accelerating MLLM Inference via Visual Token Reduction

National Taiwan Uni.

COLLABORATED WITH **MEDIA TEK**

May. 2026 - Present

- Proposed a [Global-Local Semantic Alignment framework](#) that prunes tokens by query granularity for task-specific token reduction, with a [dynamic entropy-based budget](#) allocating tokens by semantic density to balance efficiency and accuracy.
- Submitted to top-tier international artificial intelligence and machine learning conference.

Taiwan-LLM Tutor: Large Language Models for Taiwanese Secondary Education

National Taiwan Uni.

APPLIED DEEP LEARNING'S TERM PROJECT ADVISED BY PROF. **YUN-NUNG CHEN**

[ Slides,  Code]

- Developed a Taiwanese Mandarin LLM using [QLoRA](#) and [instruction tuning](#).
- Devised Vision BERT by integrating [RoBERTa](#) and [CLIP](#) to perform VQA tasks.

Academic Service

- 2026 **Reviewer**, Annual Conference on Neural Information Processing Systems
- 2026 **Reviewer**, AAAI Conference on Artificial Intelligence
- 2025 **Reviewer**, International Conference on Multimedia (MM)
- 2025 **Reviewer**, International Conference on Multimedia and Expo (ICME)

NeurIPS

AAAI

ACM

IEEE

Language Skills

Chinese Native

English Effective Operational Proficiency, TOEFL iBT: 96/120

Extracurricular Activities

Teaching Assistant

National Taiwan Uni.

COMPUTER VISION PRACTICE WITH DEEP LEARNING AND ARTIFICIAL INTELLIGENCE

Feb. 2023 - Jul. 2025

Varsity Badminton Team

National Yang Ming Chiao Tung Uni.

REPRESENTATIVE OF MEICHU 2018

Sep. 2017 - Jun. 2018

Technical Skills

- Programming&Tools** Python, LaTeX, Linux, Jupyter, and Vim
- Frameworks&Libraries** PyTorch, OpenCV, Scikit-learn, Pandas, and Numpy
- Project Management** Git, Notion, and Weight&Bias

Reference

Prof. Wen-Huang Cheng

National Taiwan Uni.

DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING

Professor, CSIE Associate Chair

- [✉ wenhuang@csie.ntu.edu.tw](mailto:wenhuang@csie.ntu.edu.tw)
- Academic Advisor for Graduate and Undergraduate Studies

Prof. Hong-Han Shuai

National Yang Ming Chiao Tung Uni.

DEPARTMENT OF ELECTRONICS AND ELECTRICAL ENGINEERING

Professor, Associate Chairman

- [✉ hhshuai@nycu.edu.tw](mailto:hhshuai@nycu.edu.tw)
- Academic Advisor for Graduate and Undergraduate Studies