Fu-En Yang

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Research Interests

○ **Multimodal AI** ○ **Embodied AI** ○ **Robotics**.

My research interests lie in multimodal AI, such as large vision-language models, multimodal understanding & reasoning, world modeling, and vision-language-action models (VLAs).

Education

Aug. 2018 - Jul. 2023
Ph.D., National Taiwan University (NTU), Taipei, Taiwan.
Graduate Institute of Communication Engineering (GICE)
Vision and Learning Laboratory ℹ
Advisor: Prof. Yu-Chiang Frank Wang ℹ link
NTU Presidential Award for Graduate Students ℹ link

Sept. 2014 - Aug. 2018
Bachelor of Science, National Taiwan University (NTU), Taipei, Taiwan.
Department of Electrical Engineering (EE)
○ Overall GPA: 4.12/4.3
○ Ranking: 26/184

Research & Industrial Experiences

Feb. 2024 - Present
Research Scientist, NVIDIA Research ℹ link.
Manager: Prof. Yu-Chiang Frank Wang ℹ link
○ Multimodal Learning, Reasoning Models, and Vision-Language-Action Models

Feb. 2023 - Aug. 2023
Research Intern, NVIDIA Research ℹ link.
Manager: Prof. Yu-Chiang Frank Wang ℹ link
○ Parameter-efficient model personalization in federated learning (ICCV-2023)
○ Vision-language models for open-vocabulary and language-driven visual analysis

Sept. 2018 - Jul. 2023
Ph.D. Researcher, Vision and Learning Laboratory ℹ, NTU, Taipei, Taiwan.
Advisor: Prof. Yu-Chiang Frank Wang ℹ link
1. Style Transfer & Domain Adaptation
○ Published as a journal paper in the IEEE Transactions on Image Processing (TIP) ℹ
2. Video Generation and Translation
○ Accepted as conference papers in CVPR-2020 ℹ & ICPR-2020 ℹ
3. Few-Shot & Zero-Shot Learning
○ Accepted as conference papers in IJCV-2023 ℹ, WACV-2022 ℹ, & ICIP-2021 ℹ
4. Domain Generalization
○ Accepted as a conference paper in NeurIPS-2021 as spotlight presentation (top 3%) ℹ
5. Federated Learning
○ Accepted as a conference paper in ICCV-2023

Sept. 2020 - Oct. 2022
AICS PhD Program, ASUS Intelligent Cloud Services (AICS) ℹ link.
Student Researcher for computer vision and medical imaging applications mentored by Prof. Yu-Chiang Frank Wang ℹ link and Prof. Stefan Winkler ℹ link
○ Cross-Domain Medical Image Analysis ℹ Paper
○ Privacy-Preserving Medical Image Analysis

Selected Publications

Preprint 2026 — **Fast-ThinkAct: Efficient Vision-Language-Action Reasoning via Verbalizable Latent Planning**.
Chi-Pin Huang, Yunze Man, Zhiding Yu, Min-Hung Chen, Jan Kautz, Yu-Chiang Frank Wang, and Fu-En Yang
Preprint, January 2026 ⓘ Project

NeurIPS 2025 — **ThinkAct: Vision-Language-Action Reasoning via Reinforced Visual Latent Planning**.
Chi-Pin Huang, Yueh-Hua Wu, Min-Hung Chen, Yu-Chiang Frank Wang, and Fu-En Yang
Conference on Neural Information Processing Systems (NeurIPS), December 2025 ⓘ Paper

ICCV 2025 — **LongSplat: Robust Unposed 3D Gaussian Splatting for Casual Long Videos**.
Chin-Yang Lin, Cheng Sun, Fu-En Yang, Min-Hung Chen, Yen-Yu Lin, and Yu-Lun Liu
IEEE International Conference on Computer Vision (ICCV), October 2025 ⓘ Paper

CVPR 2025 — **VideoMage: Multi-Subject and Motion Customization of Text-to-Video Diffusion Models**.
Chi-Pin Huang, Yen-Siang Wu, Hung-Kai Chung, Kai-Po Chang, Fu-En Yang, and Yu-Chiang Frank Wang
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), June 2025 ⓘ Paper

ECCV 2024 — **Receler: Reliable Concept Erasing of Text-to-Image Diffusion Models via Lightweight Erasers**.
Chi-Pin Huang, Kai-Po Chang, Chung-Ting Tsai, Yung-Hsuan Lai, Fu-En Yang, and Yu-Chiang Frank Wang
European Conference on Computer Vision (ECCV), October 2024 ⓘ Paper

ECCV 2024 — **Select and Distill: Selective Dual-Teacher Knowledge Transfer for Continual Learning on Vision-Language Models**.
Yu-Chu Yu, Chi-Pin Huang, Jr-Jen Chen, Kai-Po Chang, Yung-Hsuan Lai, Fu-En Yang, and Yu-Chiang Frank Wang
European Conference on Computer Vision (ECCV), October 2024 ⓘ Paper

ICLR 2024 — **RAPPER: Reinforced Rationale-Prompted Paradigm for Natural Language Explanation in Visual Question Answering**.
Kai-Po Chang, Chi-Pin Huang, Wei-Yuan Cheng, Fu-En Yang, Chien-Yi Wang, Yung-Hsuan Lai, and Yu-Chiang Frank Wang
International Conference on Learning Representations (ICLR), May 2024 ⓘ Paper

AAAI 2024 — **Language-Guided Transformer for Federated Multi-Label Classification**.
I-Jieh Liu, Ci-Siang Lin, Fu-En Yang, and Yu-Chiang Frank Wang
Thirty-Eighth AAAI Conference on Artificial Intelligence (AAAI), February 2024 ⓘ Paper

ICCV 2023 — **Efficient Model Personalization in Federated Learning via Client-Specific Prompt Generation**.
Fu-En Yang, Chien-Yi Wang, and Yu-Chiang Frank Wang
IEEE International Conference on Computer Vision (ICCV), October 2023 ⓘ Paper

IJCV 2023 — **Semantics-Guided Intra-Category Knowledge Transfer for Generalized Zero-Shot Learning**.
Fu-En Yang, Yuan-Hao Lee, Chia-Ching Lin, and Yu-Chiang Frank Wang
International Journal of Computer Vision (IJCV), 2023 ⓘ Paper

WACV 2023	**Self-Supervised Pyramid Representation Learning for Multi-Label Visual Analysis and Beyond**. Cheng-Yen Hsieh, Chih-Jung Chang, <u>Fu-En Yang</u>, and Yu-Chiang Frank Wang IEEE Winter Conference on Applications of Computer Vision (WACV), Jan 2023 ⓘ Paper
WACV 2022	**A Pixel-Level Meta-Learner for Weakly Supervised Few-Shot Semantic Segmentation**. Yuan-Hao Lee, <u>Fu-En Yang</u>, and Yu-Chiang Frank Wang IEEE Winter Conference on Applications of Computer Vision (WACV), Jan 2022 ⓘ Paper
NeurIPS 2021 Spotlight	**Adversarial Teacher-Student Representation Learning for Domain Generalization**. <u>Fu-En Yang</u>, Yuan-Chia Cheng, Zu-Yun Shiau, and Yu-Chiang Frank Wang Conference on Neural Information Processing Systems (NeurIPS), December 2021 ⓘ Paper (**top 3%** for spotlight presentation)
CVPR 2021	**LayoutTransformer: Scene Layout Generation with Conceptual and Spatial Diversity**. Cheng-Fu Yang, Wan-Cyuan Fan, <u>Fu-En Yang</u>, and Yu-Chiang Frank Wang IEEE Conference on Computer Vision and Pattern Recognition (CVPR), June 2021 ⓘ Paper
ICIP 2021	**Few-Shot Classification in Unseen Domains by Episodic Meta-Learning Across Visual Domains**. Yuan-Chia Cheng, Ci-Siang Lin, <u>Fu-En Yang</u>, and Yu-Chiang Frank Wang IEEE International Conference on Image Processing (ICIP), September 2021 ⓘ Paper
CVPR 2020	**Learning Identity-Invariant Motion Representations for Cross-ID Face Reenactment**. Po-Hsiang Huang, <u>Fu-En Yang</u>, and Yu-Chiang Frank Wang IEEE Conference on Computer Vision and Pattern Recognition (CVPR), June 2020 ⓘ Paper
ICPR 2020	**Dual-MTGAN: Stochastic and Deterministic Motion Transfer for Image-to-Video Synthesis**. <u>Fu-En Yang</u>*, Jing-Cheng Chang*, Yuan-Hao Lee, and Yu-Chiang Frank Wang (* indicates equal contribution) IEEE International Conference on Pattern Recognition (ICPR), Jan 2021 ⓘ Paper
ICPR 2020	**Semantics-Guided Representation Learning with Applications to Visual Synthesis**. Jia-Wei Yan, Ci-Siang Lin, <u>Fu-En Yang</u>, Yu-Jhe Li, and Yu-Chiang Frank Wang IEEE International Conference on Pattern Recognition (ICPR), Jan 2021 ⓘ Paper
TIP 2020	**A Multi-domain and Multi-modal Representation Disentangler for Cross-Domain Image Manipulation and Classification**. <u>Fu-En Yang</u>*, Jing-Cheng Chang*, Chung-Chi Tsai, and Yu-Chiang Frank Wang (* indicates equal contribution) IEEE Transactions on Image Processing (TIP), 2020 ⓘ Paper
ICIP 2019	**Learning Hierarchical Self-Attention for Video Summarization**. Yen-Ting Liu, Yu-Jhe Li, <u>Fu-En Yang</u>, Shang-Fu Chen, and Yu-Chiang Frank Wang IEEE International Conference on Image Processing (ICIP), September 2019 ⓘ Paper

CVPRW 2018	**Adaptation and Re-Identification Network: An Unsupervised Deep Transfer Learning Approach to Person Re-Identification**.
	Yu-Jhe Li, <u>Fu-En Yang</u>, Yen-Cheng Liu, Yu-Yin Yeh, Xiaofei Du, and Yu-Chiang Frank Wang
	IEEE Conference on Computer Vision and Pattern Recognition (CVPR) workshop, June 2018
	ⓘ Paper

▬▬▬ Academic Services

NeurIPS	**Conference Reviewer**.
	Conference on Neural Information Processing Systems (NeurIPS) 2025, 2024, 2023
ICLR	**Conference Reviewer**.
	International Conference on Learning Representations (ICLR) 2026, 2025
CVPR	**Conference Reviewer**.
	IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2026, 2025, 2024, 2023, 2022
ICML	**Conference Reviewer**.
	International Conference on Machine Learning (ICML) 2025, 2024
ICCV	**Conference Reviewer**.
	International Conference on Computer Vision (ICCV) 2025, 2023
ECCV	**Conference Reviewer**.
	European Conference on Computer Vision (ECCV) 2024
AAAI	**Conference Reviewer**.
	AAAI Conference on Artificial Intelligence (AAAI) 2026, 2025, 2024, 2023, 2022, 2021, 2020
ACM MM	**Conference Reviewer**.
	ACM International Conference on Multimedia (ACM MM) 2025
WACV	**Conference Reviewer**.
	Winter Conference on Applications of Computer Vision (WACV) 2026, 2023, 2022
ACCV	**Conference Reviewer**.
	Asian Conference on Computer Vision (ACCV) 2024, 2022
ICIP	**Conference Reviewer**.
	IEEE International Conference on Image Processing (ICIP) 2024, 2023, 2020
TPAMI	**Journal Reviewer**.
	IEEE Transactions on Pattern Analysis and Machine Intelligence
CVIU	**Journal Reviewer**.
	Computer Vision and Image Understanding
CSUR	**Journal Reviewer**.
	ACM Computing Surveys
Spring 2019	**Teaching Assistant**, NTU GICE, Taipei Taiwan.
	Deep Learning for Computer Vision
	○ Instructor: Prof. Yu-Chiang Frank Wang
	○ Designed, checked, and scored homework assignments and the final project.

▬▬▬ Awards

Nov. 2023	Honorable Mention at 2023 TAAI Ph.D. Thesis Award
Sep. 2023	NTU Presidential Award for Graduate Students
Aug. 2023	16th IPPR Best Doctoral Thesis Award

Skills

Programming	Python, C++, Matlab, LaTeX
Libraries/Tools	PyTorch, Tensorflow, Keras, OpenCV
Language	Chinese (native), English