SHANG-FU CHEN

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EDUCATION

National Taiwan University Sep 2019 - Jan 2025
PhD student Adivisor: Prof. Shao-Hua Sun

National Taiwan University Sep 2013 - Jan 2018
Bachelor of Science in Electrical Engineering

RESEARCH INTERESTS

Machine Learning, Deep Learning, Computer Vision, Robot Learning, Reinforcement Learning, Generative Models, Imitation Learning

PUBLICATION

Shang-Fu Chen*, Co-Yong, Shao-Hua Sun
"Restoring Noisy Demonstration for Imitation Learning with Diffusion Models ",
Under Review.

Ayano Hiranaka*, **Shang-Fu Chen***, Chieh-Hsin Lai*, Dongjun Kim, Naoki Murata, Takashi Shibuya, Wei-Hsiang Liao, Shao-Hua Sun, Yuki Mitsufuji
"Human-Feedback Efficient Reinforcement Learning for Online Diffusion Model Finetuning ",
International Conference on Learning Representations (**ICLR**) 2025. (*Equal contribution) [PDF Link]

Shang-Fu Chen*, Hsiang-Chun Wang*, Ming-Hao Hsu, Chun-Mao Lai, Shao-Hua Sun
"Diffusion Model-Augmented Behavioral Cloning ",
International Conference on Machine Learning (**ICML**) 2024. (*Equal contribution) [PDF Link]

Shang-Fu Chen, Yu-Min Liu, Chia-Ching Lin, Trista Pei-Chun Chen, Yu-Chiang Frank Wang
"Domain-Generalized Textured Surface Anomaly Detection",
IEEE International Conference on Multimedia and Expo (**ICME**) 2022. [PDF Link]

Zih-Ching Chen*, Lin-Hsi Tsao*, Chin-Lun Fu*, **Shang-Fu Chen**, Yu-Chiang Frank Wang
"Learning Facial Liveness Representation for Domain Generalized Face Anti-spoofing",
IEEE International Conference on Multimedia and Expo (**ICME**) 2022. [PDF Link]

Shang-Fu Chen, Jia-Wei Yan, Ya-Fan Su, Yu-Chiang Frank Wang
"Representation Decomposition for Image Manipulation and Beyond",
IEEE International Conference on Image Processing (**ICIP**) 2021. [PDF Link]

Yen-Ting Liu, Yu-Jhe Li, Fu-En Yang, **Shang-Fu Chen**, Yu-Chiang Frank Wang
"Learning Hierarchical Self-Attention for Video Summarization",
IEEE International Conference on Image Processing (**ICIP**) 2019. [PDF Link]

Shang-Fu Chen*, Yi-Chen Chen*, Chih-Kuan Yeh, Yu-Chiang Frank Wang,
"Order-Free RNN with Visual Attention for Multi-Label Classification",
AAAI Conference on Artificial Intelligence (**AAAI**) 2018 (*Equal contribution). [PDF Link]

PATENT

中華民國專利發明第I779784號："特徵解析系統、方法及其電腦可讀媒介"
蘇亞凡、游輝亮、柳恆崧、**陳尚甫**、王鈺强

中華民國專利發明第I807851號：“一種領域泛化之人臉防偽的特徵解析系統、方法及其電腦可讀媒介”
鄭玉欣、蘇亞凡、柳恆崧、**陳尚甫**、王鈺强

WORK EXPERIENCE

Sony AI Deep Generative Model Team Research Intern Jan 2024 - Aug 2024

- Investigate human-feedback-efficient reinforcement-learning-based algorithm for text-to-image diffusion model fine-tuning
- Fine-tune a pretrained Stable Diffusion model for various tasks, including reasoning, distortion correction, content safety improvement, etc

Inventec AI Research Intern May 2021 - Aug 2022

- Investigate domain generalized anomaly detection framework for texture surfaces
- Perform patch-level anomaly localization to detect anomalous locations

TEACHING EXPERIENCE

Reinforcement Learning (by Prof. Shao-Hua Sun) 2023 Fall
Graduate Teaching Assistant

Deep Learning for Computer Vision (by Prof. Yu-Chiang Frank Wang) 2019 Spring
Graduate Teaching Assistant

The Design and Analysis of Algorithms (by Prof. Yu-Chiang Frank Wang) 2017 Fall
Teaching Assistant

Machine Learning (by Prof. Hung-Yi Lee) 2017 Spring
Graduate Teaching Assistant

PROFESSIONAL SERVICE

Conference Reviewer

International Conference on Learning Representations (ICLR)	2025
European Conference on Computer Vision (ECCV)	2024
Asian Conference on Machine Learning (ACML) Journal Track	2024
IEEE International Conference on Image Processing (ICIP)	2023
The British Machine Vision Conference (BMVC)	2022
IEEE/CVF Computer Vision and Pattern Recognition Conference (CVPR)	2022, 2025

Journal Reviewer

IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)