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RESEARCH INTERESTS

Multi-modal AI, Video Understanding, Vision Transformer, Transfer Learning, Computer Vision, Deep Learning

EDUCATION

Ph.D., Georgia Institute of Technology (GPA: 4.00/4.00) August 2014 – August 2020

School of Electrical and Computer Engineering, College of Engineering Atlanta, U.S.A.

Thesis topic: *Bridging Distributional Discrepancy with Temporal Dynamics for Video Understanding*

M.S. & B.S., National Taiwan University (MS GPA: 4.25/4.30; BS GPA: 3.96/4.00) September 2006 – June 2012

Electrical Engineering, Department of Electrical Engineering Taipei City, Taiwan

RESEARCH WORK EXPERIENCE

Senior Research Scientist, NVIDIA Research, Supervisor: Prof. Yu-Chiang Frank Wang November 2022 – Present

- Vision+X multi-modal AI, including Vision-Language, Video Understanding, Efficient Tuning, [Transformer](#), etc.

Research Engineer II, Microsoft, Supervisor: Prof. Shang-Hong Lai January 2022 – October 2022

- Conducted research and deployment for generalizable and explainable facial liveness approaches for Azure Cloud AI.

Senior AI Engineer, MediaTek Inc., Supervisor: Dr. Yi-Min Tsai October 2020 – December 2021

- Edge-AI research and academic-industry collaboration for Ecosystem (e.g., co-host CVPR' 21 workshop).

Ph.D. Research, OLIVES, Advisor: Prof. Ghassan AlRegib August 2014 – August 2020

- [CVPR'20, WACV'20, ICCV'19 (Oral), CVPR'19] Video domain adaptation, [SPIC'19] Action Recognition

- [TITS'19] large-scale traffic sign detection dataset

- Research internships: Baidu USA (Summer'19), PlayStation (Summer'18), V7 Labs (Fall'17)

Research Assistant, Academia Sinica, Supervisor: Dr. Yen-Yu Lin July 2013 – July 2014

- [CVPR'14] Developed transfer learning techniques to leverage depth and skeleton knowledge for action recognition.

SELECTED PUBLICATIONS (*equal contribution / †project lead) [\(full paper list\)](#)

- Shih-Yang Liu, Chien-Yi Wang, Hongxu Yin, Pavlo Molchanov, Yu-Chiang Frank Wang, Kwang-Ting Cheng, and **Min-Hung Chen**[†]. “[DoRA: Weight-Decomposed Low-Rank Adaptation](#)”, *ICML*, 2024.

- Ardian Umam, Cheng-Kun Yang, **Min-Hung Chen**, Jen-Hui Chuang, and Yen-Yu Lin. “[PartDistill: 3D Shape Part Segmentation by Vision-Language Model Distillation](#)”, *CVPR*, 2024.

- Ji-Jia Wu, Chia-Hao Chang, Chieh-Yu Chuang, Chun-Pei Chen, Yu-Lun Liu, **Min-Hung Chen**, Hou-Ning Hu, Yung-Yu Chuang, and Yen-Yu Lin. “[Image-Text Co-Decomposition for Text-Supervised Semantic Segmentation](#)”, *CVPR*, 2024.

- Hsu-kuang Chiu, Chien-Yi Wang, **Min-Hung Chen**, and Stephen F. Smith. “[Probabilistic 3D Multi-Object Cooperative Tracking for Autonomous Driving via Differentiable Multi-Sensor Kalman Filter](#)”, *ICRA*, 2024.

- Cheng-Kun Yang, **Min-Hung Chen**, Yung-Yu Chuang, and Yen-Yu Lin. “[2D-3D Interlaced Transformer for Point Cloud Segmentation with Scene-Level Supervision](#)”, *ICCV*, 2023.

- Su-Kai Chen, Hung-Lin Yen, Yu-Lun Liu, **Min-Hung Chen**, Hou-Ning Hu, Wen-Hsiao Peng, and Yen-Yu Lin. “[Learning Continuous Exposure Value Representations for Single-Image HDR Reconstruction](#)”, *ICCV*, 2023.

- Weng-Tai Su, **Min-Hung Chen**[†], Chien-Yi Wang, Shang-Hong Lai, and Trista Pei-Chun Chen. “[Kinship Representation Learning with Face Componential Relation](#)”, *ICCV Workshop (Analysis and Modeling of Faces and Gestures)*, 2023.

- Wei-Jhe Huang, Jheng-Hsien Yeh, **Min-Hung Chen**, et al. “[Interaction-Aware Prompting for Zero-Shot Spatio-Temporal Action Detection](#)”, *ICCV Workshop (What is Next in Multimodal Foundation Models)*, 2023.

- Chih-Jung Chang, Yaw-Chern Lee, Shih-Hsuan Yao, **Min-Hung Chen**, et al. “[A Closer Look at Geometric Temporal Dynamics for Face Anti-Spoofing](#)”, *CVPR Workshop (Biometrics)*, 2023. [Best Paper Award]
- Gueter Josmy Faure, **Min-Hung Chen**, and Shang-Hong Lai. “[Holistic Interaction Transformer Network for Action Detection](#)”, *WACV*, 2023.
- Hitika Tiwari, **Min-Hung Chen**, Yi-Min Tsai, Hsien-Kai Kuo, Hung-Jen Chen, Kevin Jou, KS Venkatesh, and Yong-Sheng Chen. “[Self-Supervised Robustifying Guidance for Monocular 3D Face Reconstruction](#)”, *BMVC*, 2022.
- Min-Fong Hong, Hao-Yun Chen, **Min-Hung Chen**, Yu-Syuan Xu, Hsien-Kai Kuo, Yi-Min Tsai, et al. “[Network Space Search for Pareto-Efficient Spaces](#)”, *CVPR Workshop (Efficient Deep Learning for Computer Vision)*, 2021. [Oral]
- **Min-Hung Chen**, Baopu Li, Yingze Bao, Ghassan AlRegib, and Zsolt Kira. “[Action Segmentation with Joint Self-Supervised Temporal Domain Adaptation](#)”, *CVPR*, 2020.
- **Min-Hung Chen**, Baopu Li, Yingze Bao, and Ghassan AlRegib. “[Action Segmentation with Mixed Temporal Domain Adaptation](#)”, *WACV*, 2020.
- **Min-Hung Chen**, Zsolt Kira, Ghassan AlRegib, Jaekwon Yoo, Ruxin Chen, and Jian Zheng. “[Temporal Attentive Alignment for Large-Scale Video Domain Adaptation](#)”, *ICCV*, 2019. [Oral (acceptance rate: 4.6%), travel grant awarded].
- Chih-Yao Ma*, **Min-Hung Chen***, Zsolt Kira and Ghassan AlRegib. “[TS-LSTM and Temporal-Inception: Exploiting Spatiotemporal Dynamics for Activity Recognition](#)”, *Elsevier SPIC*, 2019. [2023 EURASIP Best Paper Award]
- Dogancan Temel, **Min-Hung Chen**, and Ghassan AlRegib. “[Traffic Sign Detection Under Challenging Conditions: A Deeper Look into Performance Variations and Spectral Characteristics](#)”, *IEEE T-ITS*, 2019.
- Yen-Yu Lin, Ju-Hsuan Hua, Nick C. Tang, **Min-Hung Chen**, and Hong-Yuan Mark Liao. “[Depth and Skeleton Associated Action Recognition without Online Accessible RGB-D Cameras](#)”, *CVPR*, 2014.

PROFESSIONAL ACTIVITIES

- Workshop Organizers: *CVPRW*, *AIVR*
- Professional Talks: *CVPR*, *ICCV*, *Academia Sinica*, *NYCU*
- Conference Reviewers: *CVPR*, *ICLR*, *NeurIPS*, *ICCV*, *ICML*, *ECCV*, *AAAI*, *WACV*, *BMVC*, *ICIP*, *ACCV*, *ICASSP*, etc.
- Journal Reviewers: *Pattern Recognition*, *IJCV*, *IEEE T-ITS*, *IEEE T-CSVT*, *IEEE Access*

HONORS AND AWARDS

- Outstanding Reviewers: [ICML 2022](#), [ICCV 2021](#), [CVPR 2021](#)
- [EURASIP Best Paper Award](#) for Image Communication Journal Fall 2023
- Student Travel Grant Award for International Conference in Computer Vision (ICCV) Fall 2019
- Ministry of Education Technologies Incubation Scholarship, Taiwan (R. O. C.) Fall 2014 – Spring 2017
- Otto F. and Jenny H. Krauss Fellowship, Georgia Institute of Technology Fall 2014 – Spring 2015

TEACHING EXPERIENCE

- Graduate Teaching Assistant**, Georgia Institute of Technology August 2014 – May 2019
- Deep Learning (Spring 2019); Computer Vision (Fall 2018)
 - Signals and Systems (Spring 2015); Fundamentals of Digital Signal Processing (Fall 2014)
- Graduate Teaching Assistant**, National Taiwan University September 2011 – June 2012
- Statistical Image Processing (Spring 2012); Computer Programming (Fall 2011)

SKILLS

- **Technical:** PyTorch / Python / Tensorflow / LuaJIT / Torch / Caffe / OpenCV / C++ / MATLAB / Linux / Unreal Engine
- **Languages:** Mandarin Chinese / English / Japanese (JLPT Level N2 Passed)

RELATED COURSE PROJECTS

Deep Learning for Video Classification; Character Recognition in Natural Images; Gender Classification by Face Analysis; Light Field Camera Refocusing; Multi-label Classification with Missing Data.

EXTRACURRICULAR ACTIVITIES

In Georgia Tech:

- President, Taiwanese Student Association in Georgia Tech Fall 2015 – Spring 2016

International Summer Program:

“Asia in Today’s World” Program, Kyushu University Summer 2011

- Final project topic: Religion Influence on Japan’s Robot Development.

American Language & Culture Program, Stanford University Summer 2007

- Final project topic: Individualism in America.

Others:

Department Basketball Team (6 years); Delicious Club (2 years); Service Volunteer; NTUEE Annual Performance; International Business Camp; NTUEE Summer Camp; Seminar on International Trade and Economy