Min-Hung (Steve) Chen 陳敏弘

Email: vitec6@gmail.com | Website: minhungchen.netlify.app/ | LinkedIn: chensteven | GitHub: cmhungsteve

EDUCATION

Ph.D., School of Electrical and Computer Engineering (GPA: 4.00/4.00) August 2014 – August 2020

College of Engineering, Georgia Institute of Technology Atlanta, U.S.A.

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

M.S., Integrated Circuits and Systems (GPA: 4.25/4.30) September 2010 – June 2012

Graduate Institute of Electronics Engineering, National Taiwan University Taipei City, Taiwan

B.S., Electrical Engineering (GPA: 3.96/4.00) September 2006 – June 2010

Department of Electrical Engineering, National Taiwan University Taipei City, Taiwan

RESEARCH INTERESTS

Transfer Learning/Domain Adaptation, Video Understanding, Computer Vision, Deep Learning, Image & Video Processing

RESEARCH WORK EXPERIENCE

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

- Cutting-edge AI Research for Azure Cognitive Services.

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

- Research and develop cutting-edge methodologies for Edge-AI.
- Coordinate academic-industry collaboration for Ecosystem (e.g., co-host CVPR' 21 workshop).

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

- Proposed large-scale datasets and developed temporal domain attentive alignment approaches for video domain adaptation.
- Developed both CNN- and RNN-based methods to effectively explore the temporal information for video classification.
- Built a large synthetic traffic sign detection dataset with various challenging conditions and scenarios using Unreal Engine.

Research Intern, Baidu USA, Supervisor: Dr. Baopu Li May 2019 – December 2019

- Developed approaches to reduce spatio-temporal variations for action segmentation with unlabeled videos.
- Developed self-supervised temporal domain adaptation approaches for action segmentation.

AI Intern, Sony Interactive Entertainment Inc., Supervisor: Dr. Ruxin Chen May 2018 – August 2018

- Developed domain adaptation algorithms to diminish the distribution gap between virtual and real videos.
- Built a gaming video dataset for action recognition.

Deep Learning Engineer Intern, Aipoly Inc., Supervisor: Simon Edwardsson August 2017 – December 2017

- Developed deep learning and computer vision framework for autonomous retail stores using only RGB cameras.

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

- Developed transfer learning techniques to leverage multi-modal knowledge (depth and skeleton) for action recognition.

M.S. Research, 3D Nano System Lab, Advisor: Prof. Yi-Chang Lu September 2010 – June 2012

- (Master Thesis) Developed a noise-robust depth estimation algorithm for pinhole-masked light field cameras.

SELECTED PUBLICATIONS (*equal contribution)

- Andrey Ignatov, Cheng-Ming Chiang, Hsien-Kai Kuo, Anastasia Sycheva, Radu Timofte, **Min-Hung Chen**, Man-Yu Lee, Yu-Syuan Xu, Yu Tseng, et al. “Learned Smartphone ISP on Mobile NPUs with Deep Learning, Mobile AI 2021 Challenge: Report”, *Mobile AI Workshop, CVPR*, 2021.
- 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”, *The Workshop of Efficient Deep Learning for Computer Vision, CVPR*, 2021. **[Oral]**

- **Min-Hung Chen**, Baopu Li, Yingze Bao, Ghassan AlRegib, and Zsolt Kira. "Action Segmentation with Joint Self-Supervised Temporal Domain Adaptation", *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
- **Min-Hung Chen**, Baopu Li, Yingze Bao, and Ghassan AlRegib. "Action Segmentation with Mixed Temporal Domain Adaptation", *IEEE Winter Conference on Applications of Computer Vision (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", *IEEE International Conference in Computer Vision (ICCV),* 2019. **[Oral (acceptance rate: 4.6%), travel grant awarded]**.
- **Min-Hung Chen**, Zsolt Kira, and Ghassan AlRegib. "Temporal Attentive Alignment for Video Domain Adaptation", *The Workshop of Learning from Unlabeled Videos, CVPR,* 2019.
- Chih-Yao Ma*, **Min-Hung Chen***, Zsolt Kira and Ghassan AlRegib. "TS-LSTM and Temporal-Inception: Exploiting Spatiotemporal Dynamics for Activity Recognition", *Signal Processing: Image Communication (SPIC)*, 2019.
- Dogancan Temel, **Min-Hung Chen**, and Ghassan AlRegib. "Traffic Sign Detection Under Challenging Conditions: A Deeper Look into Performance Variations and Spectral Characteristics", *IEEE Transactions on Intelligent Transportation Systems (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", *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR),* 2014.
- Ghassan AlRegib, **Min-Hung Chen**, David McCreadie, and Daniel Lewis Boston. "Color Learning", *U.S. Patent No. 10552692*, 2020.

PROFESSIONAL ACTIVITIES

- Program Committees: *CVPRW*, *AIVR*
- Professional Talks: *CVPR*, *ICCV*, *Academia Sinica*, *NYCU*
- Conference Reviewers: *ICLR*, *ICCV*, *ICML*, *CVPR*, *AAAI*, *NeurIPS*, *ECCV*, *ICIP*, *ICASSP*, *ICPR*, *ICIAP*, *etc.*
- Journal Reviewers: *Pattern Recognition*, *IJCV*, *IEEE T-ITS*, *IEEE T-CSVT*, *IEEE Access*

HONORS AND AWARDS

- Outstanding Reviewers: CVPR 2021, ICCV 2021
- 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
- Honor Society Eta Kappa Nu, 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 Videos 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