# Cheng-En Wu


Contact Information

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## Education

**University of Wisconsin-Madison** Fall 2020 – Present
Ph.D. student in Electrical and Computer Engineering

**National Tsing Hua University** 2014 – 2016
M.S. in Computer Science
Advised by Prof. Jia-Shung Wang

**National Taiwan University of Science and Technology** 2009 – 2012
B.S. in Electrical and Computer Engineering

## Work Experience

**TikTok**, San Jose, CA Summer 2022
*Research Intern*
Collaborated with Yu Tian, Linjie Yang, Haichao Yu and Heng Wang on prompt tuning for Vision-Language Pre-rained Models.

**NEC Labs America**, Princeton, NJ Summer 2021
*Research Intern*
Collaborated with Farlay Lai and Asim Kadav on self-supervised video representation learning.

**Academia Sinica**, Taipei, Taiwan 2018 – 2020
*Research Assistant*
Collaborated with Chu-Song Chen on unforgetting continual learning in ConvNets and efficient visual recognition with deep neural networks.

**MediaTek**, Hsinchu, Taiwan 2017 – 2018
*Software Engineer*
Improved the computational efficiency of neural networks on mobile devices and developed mobile GPU drivers to boost run-time of applications using neural networks.

**Realtek**, Hsinchu, Taiwan 2016 – 2017
*Software Engineer*
Developed H.264 encoder drivers for TV SOCs.

**ITRI**, Hsinchu, Taiwan Summer 2015
*Research Intern*
Developed MultiPath TCP to achieve high throughput of wireless networks.

**National Tsing Hua University**, Hsinchu, Taiwan 2014 – 2016
*Research Assistant*
Collaborated with Jia-Shung Wang on real-time vehicle tracking system for visual surveillance.

**GOTrust Technology**, Taichung, Taiwan 2014
*Software Engineer*
Developed middlewares for the secure MicroSD card and established an MFC-based testing tool for the production of secure MicroSD cards.

## Publications

1. **Why Is Prompt Tuning for Vision-Language Models Robust to Noisy Labels?**
*International Conference on Computer Vision (ICCV) 2023*
***Cheng-En Wu***, Yu Tian, Haichao Yu, Heng Wang, Pedro Morgado, Yu Hen Hu, Linjie Yang

2. **Self-supervised Video Representation Learning with Cascade Positive Retrieval**
*L3D-IVU Workshop at Conference on Computer Vision and Pattern Recognition (CVPR) 2022*
***Cheng-En Wu***, Farley Lai, Yu Hen Hu, Asim Kadav

3. **Merging Well-Trained Deep CNN Models for Efficient Inference**
*Conference on Asia Pacific Signal and Information Processing Association (APSIPA) 2020*
***Cheng-En Wu***, Jia-Hong Lee, Timmy ST Wan, Yi-Ming Chan, Chu-Song Chen

4. **Extending Conditional Convolution Structures For Enhancing Multitasking Continual Learning**
*Conference on Asia Pacific Signal and Information Processing Association (APSIPA) 2020*
*Cheng-Hao Tu ***Cheng-En Wu***, Chu-Song Chen

5. **Compacting, Picking and Growing for Unforgetting Continual Learning**
*Conference on Neural Information Processing Systems (NeurIPS) 2019*
Steven Hung, Cheng-Hao Tu, ***Cheng-En Wu***, Chien-Hung Chen, Yi-Ming Chan, Chu-Song Chen

6. **IMMVP: An Efficient Daytime and NighttimeOn-Road Object Detector**
*IEEE International Workshop on Multimedia Signal Processing (MMSP) 2019*
***Cheng-En Wu***, Yi-Ming Chan, Chien-Hung Chen, Wen-Cheng Chen, Chu-Song Chen

7. **On Merging MobileNets for Efficient Multitask Inference**
*$EMC^2$ Workshop at IEEE Symposium on High Performance Computer Architecture (HPCA) 2019*
***Cheng-En Wu***, Yi-Ming Chan, Chu-Song Chen

8. **Traffic pattern modeling, trajectory classification and vehicle tracking within urban intersections**
*IEEE International Smart Cities Conference (ISC2) 2017*
***Cheng-En Wu***, Wen-Yen Yang, Hai-Che Ting, Jia-Shung Wang

## Professional Services

Reviewer for ICCV, CVPR, BMVC — 2020 – Present

## Honors and Awards

Honorable Mention at the MMSP Challenge — 2019
Delta Electronics Scholarship — 2016
NTUST ECE Undergraduate Honorable Mention for Research — 2012

## Selected Projects

**Edge AI** — 2022 – Present
*University of Wisconsin-Madison*
Developed innovative block pruning methods for Convolutional Neural Networks, enabling seamless integration with edge devices like the NVIDIA Jetson Nano.

**Urban Computing** — 2015 – 2016
*National Tsing Hua University, Visual Communication Lab*
Designed a real-time vehicle tracking method from surveillance camera videos and developed a system for trajectory classification and tracklet prediction.

**Gesture Recognition** — 2010 – 2011
*National Taiwan University of Science and Technology*
Developed a method for detecting the number of fingers raised and built an Android App for gesture control of PowerPoint presentations.