# Cheng-En Wu

+1(608)338-6240 cwu356@wisc.edu https://cewu.github.io/

## EDUCATION

**University of Wisconsin-Madison** Madison, WI
*Graduate student in Electrical and Computer Engineering* Sep. 2020 - Present

**National Tsing Hua University** Hsinchu, Taiwan
*Master of Science in Computer Science* Sep. 2014 - Jul. 2016

- Advisor: Prof. Jia-Shung Wang

**National Taiwan University of Science and Technology** Taipei, Taiwan
*Bachelor of Science in Electrical and Computer Engineering* Sep. 2009 - Jun. 2012

## RESEARCH EXPERIENCE

**Academia Sinica** Taipei, Taiwan
*Research Assistant* Mar. 2018 - Aug. 2020

- Developed an approach to merge well-trained neural networks for multiple tasks.
- Built a tool for automatically merging all kinds of neural networks.
- Created an efficient on-road object detector on a embedding system.
- Innovated approaches for unforgetting continuous learning.
- Advisor: Prof. Chu-Song Chen

**National Tsing Hua University** Hsinchu, Taiwan
*Research Assistant* Sep. 2014 - Aug. 2016

- Designed a real-time vehicle tracking system for visual surveillance.
- Advisor: Prof. Jia-Shung Wang

**ITRI Inc.** Hsinchu, Taiwan
*Research Assistant* Jul. 2015 - Aug. 2015

- Developed MultiPath TCP to achieve high throughput of wireless networks.

## PUBLICATIONS

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

**Cheng-En Wu**, Yi-Ming Chan, Chien-Hung Chen, Wen-Cheng Chen, and Chu-Song Chen. "IMMVP: An Efficient Daytime and NighttimeOn-Road Object Detector." *IEEE 19th International Workshop on Multimedia Signal Processing (MMSP)*, 2019.

**Cheng-En Wu**, Yi-Ming Chan and, Chu-Song Chen. "On Merging MobileNets for Efficient Multi-task Inference." *Energy Efficient Machine Learning and Cognitive Computing for Embedded Applications ($EMC^2$) Workshop in the 25th IEEE International Symposium on High-Performance Computer Architecture (HPCA)*, 2019.

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

## WORK EXPERIENCE

**MediaTek Inc.** Hsinchu, Taiwan
*Software Engineer* Mar. 2017 - Mar. 2018

- Improved the computational efficiency of neural networks on mobile devices.
- Developed mobile GPU drivers to boost run-time of applications using neural networks.
- Migrated ARM Mali GPU drivers to the Android platform.

**Realtek Inc.** Hsinchu, Taiwan
*Software Engineer* Dec. 2016 - Mar. 2017

- Developed H.264 encoder drivers for TV SOCs.

**GOTrust Technology Inc.** Taichung, Taiwan
*Software Engineer* Jan. 2014 - Jun. 2014

- Developed middlewares for the secure MicroSD card.
- Established an MFC-based testing tool for the production of secure MicroSD cards.

## PROFESSIONAL ACTIVITIES

**Paper Reviewing:**

- British Machine Vision Conference(BMVC) 2020
- Journal of Information Science and Engineering(JSIE) 2020

## SELECTED PROJECTS

**Urban Computing** Hsinchu, Taiwan
*National Tsing Hua University, Visual Communication Lab* Sep. 2015 - Jun. 2016

- Designed a real-time vehicle tracking method in a surveillance camera.
- Developed a system for trajectory classification and tracklet prediction.

**Gesture Recognition** Taipei, Taiwan
*National Taiwan University of Science and Technology* Mar. 2010 - Feb. 2011

- Developed a method for detecting the number of fingers raised.
- Built an Android App for gesture control of PowerPoint presentations.

## PROGRAMMING SKILLS

TensorFlow, PyTorch, OpenCV, Caffe, C, C++, Python, Matlab, Android, Java