## CHENG-EN WU

CONTACT 1415 Engineering Dr Email: cwu356@wisc.edu

Information Madison, WI 53706 Webpage: https://cewu.github.io

**EDUCATION** University of Wisconsin-Madison Fall 2020 - Present

Graduate 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 NEC Labs America, Princeton, NJ Summer 2021

EXPERIENCE Research Intern

Collaborated with Farlay Lai and Asim Kadav on self-supervised video representation learning.

Academia Sinica, Taipei, Taiwan 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

2018 - 2020

2014 - 2016

2014

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.

Summer 2015 ITRI, Hsinchu, Taiwan

Research Intern

Developed MultiPath TCP to achieve high throughput of wireless networks.

National Tsing Hua University, Hsinchu, Taiwan

Research Assistant

Collaborated with Jia-Shung Wang on real-time vehicle tracking system for visual surveillance.

GOTrust Technology, Taichung, Taiwan 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. 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

2. 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

# 3. 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

#### 4. 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

#### 5. 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

### 6. On Merging MobileNets for Efficient Multitask Inference

EMC<sup>2</sup> Workshop at IEEE Symposium on High Performance Computer Architecture (HPCA) 2019 Cheng-En Wu, Yi-Ming Chan, Chu-Song Chen

# 7. 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	Reviewer for British Machine Vision Conference (BMVC)	2021
Services	Reviewer for British Machine Vision Conference (BMVC)	2020
	Reviewer for Journal of Information Science and Engineering (JSIE)	2020
Honors and	Honorable Mention at the MMSP Challenge	2019
Awards	Delta Electronics Scholarship	2016
	NTUST ECE Undergraduate Honorable Mention for Research	2012

#### SELECTED Urban Computing

2015 - 2016

Projects

 $National\ Tsing\ Hua\ University,\ Visual\ Communication\ Lab$ 

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.

# Teaching

#### Introduction to Massive Data Analysis

Fall 2015

Experience Teaching Assistant, National Tsing Hua University

Helped design curriculum for the course, designed coding projects and delivered three lectures.

### Introduction to Media Coding

Spring 2015

Teaching Assistant, National Tsing Hua University

Assisted students at office hours, graded exams and maintained a course website.