Hong-Ming Chiu

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EDUCATION

National Chiao Tung University (NCTU) **Hsinchu, Taiwan**
Bachelor in Electronics Engineering **Jun. 2017 – Jun. 2020**
- Cumulative GPA: 4.03 / 4.3. Major GPA: 4.11/4.3.
- 2018 Spring Academic Achievement Awards: ranked 3rd out of 84 students.
- Granted Exchange Student Scholarship of USD 10,000 of academic excellence.

National Chiao Tung University (NCTU) **Hsinchu, Taiwan**
Undergraduate – Dept. of Civil Engineering (Transfer to NCTU EE) **Jun. 2016 – Jun. 2017**
- 2016 Fall Academic Achievement Awards: ranked 3rd out of 41 students.
- 2017 Spring Academic Achievement Awards: ranked 1st out of 41 students.

University of Illinois at Urbana Champaign (UIUC) **Champaign, IL**
Exchange Student – Dept. of Electrical and Computer Engineering (ECE) **Jan. 2020 – May 2020**
- Cumulative GPA: 3.83 / 4.0.

RESEARCH & WORK EXPERIENCE

NCTU Artificial Intelligence and Multimedia Lab **Hsinchu, Taiwan**
Research Assistant (full-time) ***(Supervisor: Prof. Wen-Huang, Cheng)*** **July 2020 – Present**
- Worked on knowledge graph-based explainable recommender system research aiming to generate accurate and explainable recommendations in various applications.
- Assisted in arranging the 33rd IPPR Conference on Computer Vision, Graphics, And Image Processing (CVGIP 2020) in Taiwan.

UIUC Coordinated Science Lab **Champaign, IL**
Special Project on Electronics ***(Supervisor: Prof. Venugopal V. Veeravalli)*** **Jan. 2020 – May 2020**
- Built a demo for the model change detection system on a landmine dataset, which utilized machine learning algorithms to classify landmine data collected from different surface conditions.

USC Signal Transformation, Analysis and Compression Group **Los Angeles, CA**
Summer Research ***(Supervisor: Prof. Antonio Ortega & Prof. Carrson C. Fung)*** **Jul. 2019 – Aug. 2019**
- Researched and implemented multiple graph learning methods and applications such as graph learning for kriging, variogram and Gaussian Markov random field.

NCTU Communication Electronics and Signal Processing Lab **Hsinchu, Taiwan**
Special Project on Electronics ***(Supervisor: Prof. Carrson C. Fung)*** **Mar. 2019 – Jul. 2020**
- Research in graph learning algorithm for received signal power interpolation problem, which is an essential technology for implementing preemptive resource allocation in location-aware communications.
- Proposed a Graph Learning and Augmentation Based Interpolation approach to solve the received signal power interpolation problem with higher accuracy and lower run-time complexity.
- Sponsored by the Ministry of Science and Technology (paper published on EUSIPCO 2020).

NCTU VLSI Signal Processing Lab **Hsinchu, Taiwan**
Special Project on Electronics ***(Supervisor: Prof. Tian-Sheuan, Chang)*** **Jun. 2018 – Jan. 2019**
- Researched in adaptive pruning for Convolution Neural Network.
- Proposed an efficient run-time adaptive pruning algorithm that saves up to 50% floating-point operations (FLOP) while trading less than 10% of the top-1 accuracy.
- Sponsored by the Ministry of Science and Technology (paper published on EUSIPCO 2020).

PUBLICATIONS (code available on https://hong-ming.github.io/#mypublications)

[1] **Hong-Ming Chiu**, Kuan-Chih Lin and Tian Sheuan Chang, "Run Time Adaptive Network Slimming for Mobile Environments," 2019 IEEE International Symposium on Circuits and Systems (ISCAS).

[2] **Hong-Ming Chiu**, Carrson C. Fung and Antonio Ortega, "Graph Learning and Augmentation Based Interpolation of Signal Strength for Location-Aware Communications," 2020 European Signal Processing Conference (EUSIPCO).

ACADEMIC PROJECTS (demo & code available on https://hong-ming.github.io/#myprojects)

Building Oscilloscope on FPGA **Fall 2018**

– Implemented a simple oscilloscope using Nexys 4 DDR board and printed circuit board; received the best project prize in Digital Laboratory class at NCTU.

Huffman Coding Hardware **Fall 2018**

– Implemented 8-bit Huffman coding algorithm using SystemVerilog; ranked 1st in Digital Circuits and Systems class at NCTU in terms of simulation time and synthesis area.

Minimum Mean Cycle Problem **Fall 2019**

– Designed an algorithm to solve minimum mean cycle problem on graph using dynamic programming; ranked top 5 in Advanced Algorithm class at NCTU in terms of run time.

PROFESSIONAL ACTIVITIES

ACM Multimedia 2020 Paper Reviewer **Oct. 2020, Seattle, WA**

IEEE-HKN Student Leadership Conference Participant **Nov. 2019, Boston, MA**

EXTRACURRICULAR ACTIVITIES

IEEE-Eta Kappa Nu, Mu Sigma Chapter **Hsinchu, Taiwan**

Recording Secretary **May 2019 – May 2020**

– Communicated with staff in NCTU; invited foreign alumni to give a speech about previous educational and work experience in Taiwan and in the U.S.; organized workshops.

NCTU IEEE Student Bench **Hsinchu, Taiwan**

Finance and Secretary **Mar. 2019 – Mar. 2020**

– Built platform for NCTU students to receive advice from foreign alumni.

– Coordinated sharing activities and alumni speeches for NCTU students.

AIESEC in Taiwan **Hsinchu, Taiwan**

Incoming Global Community Development Program Manager **Jun. 2016 – Jul. 2017**

– Organized tour around Taiwan for 8 college students from different countries.

– Organized an international cultural workshop for high school students in Hsinchu.

– Attracted international college students to come to Taiwan to work in social impact positions in rural schools.

NCTU Department Table Tennis Team **Hsinchu, Taiwan**

Team Member **Jun. 2017 – Jun. 2020**

– Won 1st place in an interscholastic match in 2019.

SKILLS & INTERESTS

Languages	Fluent in Mandarin; Conversational Proficiency in English.
Technical Skills	MATLAB, C++, Python, Verilog, SystemVerilog, HTML, CSS, LaTeX.
Research Interests	Machine Learning, Optimization, Graph Learning, Communications.