Chiu, Hong-Ming

Home Address: 3rd Floor, No. 208, Ersheng 1st Road, Qianzhen District, Kaohsiung City 80655, Taiwan(R.O.C.)
TEL: (+886) 917-276-196 | Email: hongmingchiu0217@gmail.com (Primary), h15731573@gmail.com (Secondary)
Website: https://hong-ming.github.io/

Education

National Chiao Tung University (NCTU)	**Hsinchu, Taiwan**
Bachelor in Electronics Engineering	**June 2017 – June 2020**

- Overall GPA: 4.03 / 4.3. Major GPA: 4.11/4.3.
- 2018 Spring Academic Achievement Awards: ranked 3rd out of 84 students.
- Exchange Student Scholarship: USD 10,000.

National Chiao Tung University (NCTU)	**Hsinchu, Taiwan**
Undergraduate, Department of Civil Engineering (Transfer to NCTU EE)	**June 2016 – June 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, USA**
Exchange Student in Electrical and Computer Engineering (ECE)	**January 2020 – May 2020**

- Overall GPA: 3.83 / 4.0.

Research & Work Experience

NCTU VLSI Signal Processing Lab	**Hsinchu, Taiwan**
Special Project on Electronics	**June 2018 – January 2019**

- Supervised by professor Tian-Sheuan, Chang.
- Research in adaptive pruning for Convolution Neural Network on object recognition.
- Proposed an efficient run-time adaptive pruning algorithm that is able to save up to 50% floating-point operations (FLOP) while trading less than 10% of the top-1 accuracy. This research is sponsored by the ministry of science and technology in Taiwan (paper published on ISCAS 2019).

NCTU Communication Electronics and Signal Processing Lab	**Hsinchu, Taiwan**
Special Project on Electronics	**March 2019 – July 2020**

- Supervised by professor Carrson C. Fung.
- 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. This research is sponsored by the ministry of science and technology in Taiwan (paper published on EUSIPCO 2020).

USC Signal Transformation, Analysis and Compression Group	**Los Angeles, CA, USA**
Summer Research Collaboration Internship	**July 2019 – August 2019**

- Supervised by professor Antonio Ortega.
- Researched and implemented multiple graph learning methods and applications such as graph learning for kriging, variogram and Gaussian Markov random field.

UIUC Coordinated Science Lab	**Champaign, IL, USA**
Special Project on Electronics	**January 2020 – May 2020**

- Supervised by professor Venugopal V. Veeravalli.
- Built a demo for the model change detection system on landmines dataset, which utilized machine learning algorithms to classify landmines data collected from different surface conditions.

NCTU Artificial Intelligence and Multimedia Lab	**Hsinchu, Taiwan**
Full-time Research Assistant	**July 2020 – Present**

- Worked on knowledge graph based explainable recommender system research with professor Wen-Huang, Cheng, aiming to generate accurate and explainable recommendations in various applications.
- Assisting the arrangement of the 33rd IPPR Conference on Computer Vision, Graphics, And Image Processing (CVGIP 2020) in Taiwan.

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 PCB.
- Received the best project prize in class Digital Laboratory at NCTU.

Huffman Coding Hardware   **Fall 2018**
- Implemented 8-bit Huffman coding algorithm using System Verilog.
- Ranked 1st in class Digital Circuits and Systems at NCTU in terms of simulation time and synthesis area.

Minimum Mean Cycle Problem   **Fall 2019**
- Designed an algorithm for minimum mean cycle problem on graph using dynamic programming.
- Ranked top 5 in class Advanced Algorithm at NCTU in terms of run time.

Professional Activities

ACM MM 2020 Paper Reviewer   **October 2020, Seattle, WA, USA**
IEEE-HKN Student Leadership Conference Participant   **November 2019, Boston, MA, USA**

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 school life and life in the U.S.; organized workshops.

NCTU IEEE Student Bench   **Hsinchu, Taiwan**
Finance and Secretary   **March 2019 – March 2020**
- Built a bridge between foreign alumni and students in NCTU, which provides a platform for NCTU students to recieve advice from foreign alumni.
- Coordinated the sharing activities and alumni speeches for students in NCTU.

AIESEC in Taiwan   **Hsinchu, Taiwan**
Incoming Global Community Development Program Manager   **March 2017 – July 2017**
- Organized tour around Taiwan with 8 college students from different countries.
- Organized international culture workshop for high school students in Hsinchu.
- Invited college students around the world to attend the volunteering job in rural schools for culture exchange and English lectures in Hsinchu, Taiwan.

Skills & Interests

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

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).