

(Daniel) Shiu-hong KAO

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EDUCATION

- **The Hong Kong University of Science and Technology** Hong Kong S.A.R., China
Bsc in Data Science and Technology / Bsc in Computer Science Aug 2019 - May 2023
GPA: **3.764**, Major GPA: **3.893**
- **Northwestern University** Illinois, USA
Exchange Student in McCormick School of Engineering Mar 2022 - Jun 2022
GPA: **4.000**

RESEARCH EXPERIENCES

- **Divide and Distill: Achieving Higher Accuracy, Speed and Data-Efficiency for Knowledge Distillation**
First Author, under second-phase review of top conference in artificial intelligence
Deep Learning, Computer Vision, Model Compression
 - We propose a fast, accurate, and data-efficient technique for neural network compression that can be applied on multiple CNN and vision transformer models.
- **Run, Don't Walk: Chasing Higher FLOPS for Faster Neural Networks**
Second Author, accepted by CVPR 2023
Deep learning, Convolutional Neural Networks, Network Architecture Design
 - We present a simple yet fast and effective partial convolution (PConv), as well as a latency-efficient family of network architectures called FasterNet.
- **Integer Partition: Further Discussion of the Number of the Integer-side Triangles**
First Author, Silver medal at Yau's Award 2018
Combinatorics, Discrete Math
 - A closed-form solution for the number of integer-side quadrilaterals with perimeter m and a recursive relationship for the number the integer-side n -sided polygons with perimeter m .

ACADEMIC PROJECTS

- **Dynamic Neural Network Comparison: Efficiency and Performance** Sep 2021 - Jan 2022
Undergraduate Research Opportunities Program (UROP), HKUST
Deep Learning, Computer Vision, Dynamic Neural Network
 - Testing, analyzing, and comparing the performance and efficiency of different deep learning models.
- **Press Release Classification on Mobile Application** Feb 2021 - Jun 2021
Undergraduate Research Opportunities Program (UROP), HKUST
Android Development, Machine Learning, Natural Language Processing
 - Developing a text-classifying AI model compact with memory-limited mobile devices.
- **AlignKD: A Low-cost Technique for Convolutional Shortcut Removal** Sep 2022 - Dec 2022
Course Title: COMP4471 Deep Learning for Computer Vision
Deep Learning, Convolutional Neural Networks
 - Suggesting a cheap method to remove shortcuts in convolutional neural networks while preserving the performance.

TEACHING EXPERIENCE

- **Undergraduate Teaching Assistant** Fall 2022, Spring 2023
Department of Computer Science and Engineering, HKUST
Course: COMP2611 Computer Organization, HKUST
 - Assisting with the lab sessions, holding office hours by appointment, providing solutions for in-class exercises.

INTERNSHIP

- **Software Engineer (Summer Intern)** Jun 2021 - Aug 2021
Hong Kong Applied Science and Technology Research Institute
- Designing and developing algorithms to solve problems; researching the latest technologies; tasks including image processing, OCR, data parsing, deep learning, etc.
- **Software Developer (Part-time)** Mar 2020 - Jun 2020
Jing Ping Educational Creation Ltd.
- Implementing a financial system using Python and VBA.

AWARDS

- **Chern Class Scholarship** Academic Year 2020-21
The Hong Kong University of Science and Technology
- Scholarship for students with excellent performance in mathematics.
- **University Scholarship for Continuing Undergraduate Students** Academic Year 2021-22, 2022-23
The Hong Kong University of Science and Technology
- Academic scholarship for the students at HKUST whose CGA is in the top 10th percentile of all continuing undergraduate students.
- **Silver Medal, Shing-Tung Yau High School Mathematics Award** Jul 2018
National Taiwan University
- National science fair for mathematical research in Taiwan.
- **Dean's List** Fall 2019, Fall 2020, Spring 2021, Fall 2022
The Hong Kong University of Science and Technology
- Academic award for a high GPA at HKUST.
- **High Honors** Spring 2022
Northwestern University
- Academic award for a full GPA at NU.

EXTRA-CURRICULAR ACTIVITIES

- **Head Student Ambassador** Nov 2022 - Current
Undergraduate Recruitment and Admissions Office, HKUST
- **Peer Mentor** Aug 2021 - Jun 2022
School of Science, HKUST
- **Sub-Committee Member** Sep 2019 - May 2020
Mainland Student and Scholars Society, UG session, HKUST
- **Deputy Head Student Ambassador** Nov 2021 - Nov 2022
Undergraduate Recruitment and Admissions Office, HKUST
- **Student Ambassador** Nov 2019 - Current
Undergraduate Recruitment and Admissions Office, HKUST
- **Taiwanese Student Association (TSA, HKUST)** Sep 2019 - May 2023
Member in TSA, HKUST
- **Taiwanese American Student Association (TASA, NU)** Mar 2022 - Jun 2022
Member in TASA, Northwestern University