

Daniel Shiu-hong KAO

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EDUCATION

- National University of Singapore
PhD in Computer Science
Singapore
Jan 2026 - Now
- The Hong Kong University of Science and Technology
MPhil in Computer Science and Engineering
GPA: **3.86/4.30**; Supervisor: Professor Chi-Keung Tang (Email: cktang@cs.ust.hk)
Hong Kong S.A.R., China
Sep 2023 - Aug 2025
- The Hong Kong University of Science and Technology
Bsc in Data Science and Technology / Bsc in Computer Science
GPA: **3.76/4.30**, Major GPA: **3.92/4.30**, WES iGPA: **3.83/4.00**; First Class Honors
Hong Kong S.A.R., China
Sep 2019 - Jul 2023
- Northwestern University
Exchange Student in McCormick School of Engineering
GPA: **4.00/4.00**; High Honors
Illinois, USA
Mar 2022 - Jun 2022

AWARDS

- Stars of Tomorrow Award of Excellence
Microsoft Research Asia
Selected award for interns with outstanding effort and performance at Microsoft Research Asia.
Jan 2025
- Postgraduate Studentship
The Hong Kong University of Science and Technology
Research grant for HKUST Research Postgraduate (RPg) students.
Academic Year 2023-24
- First Class Honors
The Hong Kong University of Science and Technology
Undergraduate academic award
Jul 2023
- Chern Class Scholarship
The Hong Kong University of Science and Technology
Scholarship for students with excellent performance in mathematics.
Academic Year 2020-21
- University Scholarship for Continuing Undergraduate Students
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.
Academic Year 2021-22, 2022-23
- Silver Medal, Shing-Tung Yau's Mathematics Award
National Taiwan University
National science fair for mathematical research.
Jul 2018
- Dean's List
The Hong Kong University of Science and Technology
High GPA at HKUST. Fall 2019, Fall 2020, Spring 2021, Fall 2022, Spring 2023 (5 out of 7 semesters)
2019-2023
- Dean's List (High Honors)
Northwestern University
Academic award for a full GPA at NU.
Spring 2022

PUBLICATIONS

- **CoT-RVS: Zero-Shot Chain-of-Thought Reasoning Segmentation for Videos**
Shiu-hong Kao, Yu-Wing Tai, Chi-Keung Tang
Arxiv preprint: arXiv:2505.18561. Project page: <https://danielshkao.github.io/cot-rvs.html>.
- **Think Before You Segment: High-Quality Reasoning Segmentation with GPT Chain of Thoughts**
Shiu-hong Kao, Yu-Wing Tai, Chi-Keung Tang
Arxiv preprint: arXiv:2503.07503. Project page: <https://danielshkao.github.io/thinkfirst.html>.
- **StreamGS: Online Generalizable Gaussian Splatting Reconstruction for Unposed Image Streams**
Yang LI, Jinglu Wang, Lei Chu, Xiao Li, **Shiu-hong Kao**, Ying-Cong Chen, Yan Lu
International Conference on Computer Vision 2025 (ICCV 2025). *Work done during internship at MSRA.*
- **UVRM: A Scalable 3D Reconstruction Model from Unposed Videos**
Shiu-hong Kao, Xiao Li, Jinglu Wang, Yang Li, Chi-Keung Tang, Yu-Wing Tai, Yan Lu
Arxiv preprint: arXiv:2501.09347. *Work done during internship at MSRA.*
- **Deceptive-NeRF/3DGS: Diffusion-Generated Pseudo-Observations for High-Quality Sparse-View Reconstruction**
Xinhang Liu, Jiaben Chen, **Shiu-hong Kao**, Yu-Wing Tai, Chi-Keung Tang
The European Conference on Computer Vision 2024 (ECCV 2024).
- **InceptionHuman: Controllable Prompt-to-NeRF for Photorealistic 3D Human Generation**
Shiu-hong Kao, Xinhang Liu, Chi-Keung Tang, Yu-Wing Tai
Arxiv preprint arXiv:2311.16499.
- **Run, Don't Walk: Chasing Higher FLOPS for Faster Neural Networks**
Jierun Chen, **Shiu-hong Kao**, Hao He, Weipeng Zhuo, Song Wen, Chul-Ho Lee, S.-H. Gary Chan
The IEEE/CVF Conference on Computer Vision and Pattern Recognition 2023 (CVPR 2023).
- **StableKD: Breaking Inter-block Optimization Entanglement for Stable Knowledge Distillation**
Shiu-hong Kao*, Jierun Chen*, Gary S.H. Chan
Arxiv preprint arXiv:2312.13223. *Equal contribution.

ACADEMIC SERVICES

- **Reviewer:** ICLR 2025
- **Sub-reviewer:** BMVC 2023, ICLR 2024, CVPR 2024
- **Teaching assistant:** Deep Learning in Computer Vision, Computer Graphics, Computer Organization

RESEARCH PROJECTS

- **AlignKD: A Low-cost Technique for Convolutional Shortcut Removal** Sep 2022 - Dec 2022
Course project for Deep Learning for Computer Vision
Deep Learning, Convolutional Neural Networks
- **Dynamic Neural Network Comparison: Efficiency and Performance** Sep 2021 - Jan 2022
Undergraduate Research Opportunities Program (UROP), HKUST
Deep Learning, Computer Vision, Dynamic Neural Network
- **Press Release Classification on Mobile Application** Feb 2021 - Jun 2021
Undergraduate Research Opportunities Program (UROP), HKUST
Android Development, Machine Learning, Natural Language Processing

INDUSTRIAL RESEARCH EXPERIENCE

- **Microsoft Research Lab, Asia** Jun 2024 - Now
Research Intern, Media Computing Group
Research and publish paper in conferences with focus on 3D computer vision.
- **Hong Kong Applied Science and Technology Research Institute** Jun 2021 - Aug 2021
Summer Intern, Multimedia Systems And Analytics
Design and develop algorithms to solve problems; research the latest technologies; tasks including image processing, OCR, deep learning, etc.

INVITED TALKS

- **NCKU 2023 AIoT Training Camp with Special Topic on Autonomous Vehicles** Jul 2023
National Cheng Kung University
Invited talks about autonomous vehicles and self-driving technologies.
- **Divide and Distill: Achieving Higher Accuracy, Speed and Data-Efficiency for Knowledge Distillation** May 2023
The Hong Kong University of Science and Technology
Presentation for the undergraduate thesis “Divide and Distill (DnD)”.

LEADERSHIP

- **Head Student Ambassador** Academic Year 2022-23
The Hong Kong University of Science and Technology
Assisting with university's undergraduate recruitment, including experience sharing, presentations, and other recruiting events.
- **Peer Mentor** Academic Year 2021-22
School of Science, The Hong Kong University of Science and Technology
Mentoring, providing necessary helps, holding orientation events for freshmen in the university.
- **Sub-committee, Mainland Students and Scholars Society, UG Section** Academic Year 2019-20
The Hong Kong University of Science and Technology
- **Student Ambassador** 2019-2023
The Hong Kong University of Science and Technology
- **Taiwanese Student Association** 2019-2023
The Hong Kong University of Science and Technology
- **Taiwanese American Student Association** Spring 2022
Northwestern University

OTHERS

- **Skills:** Artificial Intelligence, deep learning, computer vision, statistical inference, big data systems, edge computing
- **Languages:** Mandarin (native), English (professional), Hokkien (native), Cantonese (medium)
- **Hobbies:** Guitar, singing, cooking, traveling, bartending, snooker, sports