CHOI Ching Lam

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EDUCATION

The Chinese University of Hong Kong (CUHK)	Sep 2020 − Present
BEng in Artificial Intelligence: Systems & Technologies (AIST)	**Major GPA: 3.800 / 4.000**
Diocesan Girls' School	Sep 2015 − Jul 2020
Deeplearning.ai, Coursera	May 2018

The Deep Learning Specialization : *https://coursera.org/share/79cb80a49acd6d0fe866c9d61702362c*

PUBLICATIONS & PRE-PRINTS

[1] Rui Liu, Yixiao Ge, **Ching Lam Choi**, Xiaogang Wang and Hongsheng Li, "DivCo: Diverse Conditional Image Synthesis via Contrastive Generative Adversarial Network", in CVPR, 2021

[2] Yixiao Ge, Xiao Zhang, **Ching Lam Choi**, Ka Chun Cheung, Peipei Zhao, Feng Zhu, Xiaogang Wang, Rui Zhao, Hongsheng Li. "Self-distillation with Batch Knowledge Ensembling Improves ImageNet Classification." arXiv preprint arXiv:2104.13298 (2021)

WORK & RESEARCH EXPERIENCE

Topics: *Adversarial training and robustness, self-supervised learning (SSL), generative modeling*

Stanford AI Lab (SAIL), Stanford University : *Research Intern* Jan 2022 − Jul 2022
- **Advisor**: Professor Jiajun Wu
- **Focus**: Scene understanding via Neural Radiance Fields (NeRFs); generalisable, transferable NeRFs

Multimedia Laboratory, CUHK : *Research Mentee* Aug 2019 − Present
- **Advisor**: Professor Hongsheng Li
- **Focus**: Self-supervised Learning, Generative models, fine-grained video understanding

Theoretical Machine Learning Lab, CUHK : *Research Assistant* Jan 2022 − Present
- **Advisor**: Professor Farzan Farnia
- **Focus**: Adversarial training and robustness; understanding generalisation; MixUp

NVIDIA AI Tech Center : *Research Intern* Sep 2020 − Oct 2021
- **Advisors/Collaborators**: Dr. Charles Cheung, Dr. Simon See
- **Focus**: Audio-visual video understanding; robust, explainable Generative Adversarial Networks

CUHK UG Summer Research: *Intern* Jun − Aug 2021
- **Advisor**: Professor Anthony Man-Cho So
- **Focus**: Deep metric-learning for improving DNN generalisation and robustness

CityU Apps Lab, City University of Hong Kong: *Summer Lab Intern* Jul 2018 − Sep 2018
- Co-developed learning materials (Python, Tensorflow, linear algebra basics) for CityU's AI Summer Course
- Co-taught & TA'd the AI Summer Course
- Introduced MIT App Inventor to aspiring secondary school teachers through Teach4HK

Professional Volunteering & Services

ICCV 2021 **Undergraduates in Computer Vision Social:** *Co-organiser & Panelist* Sep − Oct 2021
- Co-organised the UG in CV Social *(inc. 4 keynotes, 1 student panel, 1 mingling/networking session)* with Samarth Sinha; presented on breaking into and publishing research as an undergraduate.
- Keynote speakers Prof. Animesh Garg, Prof. Hugo Larochelle, Prof. Zeynep Akata, Dr. Nan Rosemary Ke shared insights and answered audience's questions on CV research in academia and the industry.

ICLR 2022 **CoSubmitting Summer Workshop:** *Co-organiser* Aug 2021 − Apr 2022
- Co-organised the CSS Workshop with ICLR DEI Co-chairs Rosanne Liu & Krystal Maughan and more
- CSS supported 55 research proposals by underrepresented groups in ML and first-time ICLR submitters, and provided funding to execute their ideas.

EuroPython 2020 : *Speaker* 24 Jul 2020
- Talk: Corona-Net: Fighting COVID-19 With Computer Vision
- Second-largest Python conference in the world (https://ep2020.europython.eu/talks/HeAc9o4-corona-net/)

JuliaCon 2020 : *Speaker* 31 Jul 2020
- Talk: Julia Track Google Code In and Beyond
- Online conference with over 10,000 unique attendees (https://juliacon2020.now.sh/talk/HJTZNE)

Student Code-in 2020: *Mentor* Jun 2020 − Aug 2020
- Mentored students in the 2-months long programme for the Face Mask Detection project, a Computer Vision system based on OpenCV, Tensorflow and Keras (github.com/chandrikadeb7/Face-Mask-Detection)

Hong Kong Open Source Conference (HKOSCon) 2020: *Speaker* 13 Jun 2020
- Talk: Julia – Looks like Python, feels like Lisp, runs like C/Fortran (https://youtu.be/VKcwnHJm2V0)

Python Conference Hong Kong 2020 (PyCon HK): *Speaker* 10 May 2020
- Talk: Fighting COVID-19 with Machine Learning (https://youtu.be/cd1j25JxOJc)

Leadership Experience

Morningside College Student Union : *External Vice-President* Mar 2022 − Mar 2023
- Elected via college-wide approval voting, with the most "For" votes (79) and 0 "Against" votes.

Hong Kong Joint School Electronics and Computer Society : *40th President* 2018 − 2019
- Organised the HKDSE ICT Seminar for F.5-6 HK students, with an expert lecture and tailored notes for examination preparation.
- Presented on "Undergraduate Computer Vision Research" as an alumna speaker.

Julia Community Student Club Leader 2020 2020 − 2021
- Introduced Julia to the HK community; gave talks at conferences on Julia (JuliaCon, HKOSCon).

Projects

Corona-Net | ***Python:*** *PyTorch, NumPy, Matplotlib;* ***Julia:*** *Flux, Images, CuArrays; Git* Mar 2020 − Jul 2020
- Leveraging U-Net and Efficient-Net for CT COVID-19 segmentation and classification
- Python: (github.com/chinglamchoi/Corona-Net); Julia: (github.com/chinglamchoi/JuliaCon)

MAESTRO.ai TaiChi Tutor | *Tensorflow.js, Bootstrap, Node.js, Git* Jul 2019 − Jan 2020
- Leveraged Tensorflow.js PoseNet model for real-time 2D Human Pose Estimation
- Bridging the intergenerational communication gap in HK through TaiChi

Elesafer | *Python, C++, Darknet, Django* Jul 2018 − May 2019
- Build dataset for and trained YOLOv3 for real-time detection weapons (guns, knives) in CCTV footage

International Awards

Google Code In 2019 : Runner-up   Dec 2019 – Jan 2020
Google & The Julia Programming Language
- Created a second order ordinary differential equations (ODE) solver using Neural Networks
- Code open-sourced at: github.com/chinglamchoi/GCI_With_Julia

The 2nd International Artificial Intelligence Fair : First Prize, Academic Scholarship   Aug 2020
Sensetime
- IAIF included 1,000+ projects from China, USA, India, Singapore, Singapore, HK, etc

The 5th International Invention Innovation Competition in Canada (iCan 2020):   Aug 2020
Best 10 Women Inventors, Special Award (TISIAS), Gold Medal
Toronto International Society of Innovation & Advanced Skills (TISIAS)

NASA SpaceApps Challenge 2020: HK global nominee, Best Use of Data Award, Most   Oct 2020
Inspirational Award
NASA , US Consulate General HK & Macau, Hong Kong Observatory, City University of Hong Kong

The 5th International Mathematical Modelling Challenge: First-class Honours   Aug 2019
(International Round + Greater China Winter Contest), Second-class Honours (Greater
China Autumn Contest)
International Mathematical Modelling Challenge

International Symposium on STEM Education 2019: Best Project Champion,   Jul 2019
Outstanding Performance Award, Academic Scholarship
Microsoft , The University of Hong Kong & HKU Academy for the Talented

Google Hash Code 2020 Online Qualification Round: Oct 2020
14th in Hong Kong, 2531/10724 worldwide
Google

Scholarships & Recognition

Outstanding Students Awards 2021 (Innovation and Invention)   Sep 2021
The Chinese University of Hong Kong
- The awards aim to recognise the students' significant contributions and their continual positive impact on the CUHK community and society.

HKEX Foundation Scholarship for Biotechnology and Innovation 2019/2020   May 2021
HKEX Foundation Limited
- Scholarship awarded to recognise accomplishments in biotechnology/innovation and support scholars' future endeavours.

HSBC Greater Bay Area (Hong Kong) Scholarship 2020/2021   Jun 2021
HSBC (The Hongkong and Shanghai Banking Corporation Limited)
- Scholarship awarded to student talents in the Greater Bay Area, as the demand for talent grows exponentially as businesses become more digital and innovative.

PI Scholarship 2021-22   Nov 2021
Morningside College, CUHK
- Recognises outstanding academic performance in the academic year 2020-21.

Morningside College Conference Grant 2020-21   Apr 2021
Morningside College, CUHK
- Grant awarded to support my participation in the CVPR 2021: IEEE Conference on Computer Vision and Pattern Recognition organized by IEEE Computer Society, The Computer Vision Foundation (CVF) on 19-25 June 2021 (with 1 accepted poster).

Morningside Achievement Award 2020-2021   Mar 2021
Morningside College, CUHK
  - Scholarship awarded in recognition of scholars' achievements in extra-curricular pursuits; awarded annually to 1 student.

Dean's List 2020-2021   Jul 2021
Faculty of Engineering, CUHK
  - Awarded to the top 10% of students in the Engineering faculty who have attained a year GPA of at least 3.50/4.0.

Master's List 2021   Nov 2021
Morningside College, CUHK
  - Students with a GPA of 3.5 or above are rewarded with a place on the Master's List.

David Parker General Education Best Essay Prize 2020-21   Apr 2021
Morningside College, CUHK
  - Scholarship awarded for my essay in the General Education - Morningside College philosophy course, "GEMC 1001 - Freshman Seminar: Current Dilemmas and Their Histories".

Morningside Admission Scholarship 2020   Oct 2020
Morningside College, CUHK
  - Recognises academic achievements upon admission to The Chinese University of Hong Kong and Morningside College.

Outstanding ICT Rising Star Award   Aug 2020
Hong Kong Computer Society
  - To honour the achievements of female ICT leaders, and to celebrate the innovation and contribution from young females to the sector.

22nd Hong Kong Youth Science and Technology Innovation Competition: Jun 2020
Computer Science and ICT: Champion; Bull B Tech Special Award; Academic Scholarship
HKNGCA Science Innovation Centre
  - HKSTIC is the largest academic STEM competition in HK, with nearly 4,000 project entries overall.

FIRST Tech Challenge (FTC): HK: Inspire Award Finalist, Semi-Finalist Alliance   2019
FIRST, The Hong Kong University of Science and Technology

The SciTech Challenge: Champion; Best Presentation Award; Seed Funding   Jul 2019
Hong Kong Science Park & Arrow Electronics

13th Hong Kong Budding Scientists Award: 1st Runner-up; EDB & HKSAR   Nov 2019
Scholarship; Fung Hon Chu Education Trust Fund Scholarship
Education Bureau (EDB) & Hong Kong Association for Mathematics and Science Education

TECHNICAL SKILLS

Languages: English, Mandarin, Cantonese, Python, Julia, C, JavaScript, HTML/CSS
Libraries: PyTorch, NumPy, Matplotlib, Pandas, FluxML, SciML, JQuery