CHOI Ching Lam

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Google Scholar | github.com/chinglamchoi | linkedin.com/in/ching-lam-choi/

Education

The Chinese University of Hong Kong (CUHK) Sep 2020 – Present
Bachelor of Engineering in Electronic Engineering **GPA: 3.925 / 4.000**

Diocesan Girls' School Sep 2015 – Jul 2020

Deeplearning.ai, Coursera May 2018
The Deep Learning Specialization : *https://coursera.org/share/79cb80a49acd6d0fe866c9d61702362c*

Hong Kong Academy for Gifted Education Jan 2016 – Jul 2020

HKU Academy for the Talented, The University of Hong Kong Mar 2018 – Jul 2020

Work & Leadership Experience

UG Summer Research : *Intern* Jun – Aug 2021
- Supervisor: Professor Anthony MC So
- Project: Optimization Methods for Machine Learning
- Organised by the Engineering Faculty of The Chinese University of Hong Kong

TCL Corporate Research(Hong Kong) Co., Ltd. : *Research Intern* May – Dec 2021
- Project: Video comprehension and analytics with Deep Learning (details tbc)

NVIDIA AI Tech Center : *Intern* Sep 2020 – Present
- Focus: Explainable AI techniques in Deep Learning: towards robust explainable Generative Adversarial Networks, mitigating the mode collapse problem; Multi-modal Conditional Generation

Multimedia Laboratory, CUHK : *Research Mentee* Aug 2019 – Present
- Computer Vision Research: Weakly-supervised learning, Generative models (e.g. GAN mode collapse problem, text-to-image), text-to-video retrieval (video captioning)
- **Publication**: 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
- **In Submission**: 2 projects on the GAN mode collapse problem, self-knowledge distillation, ICCV 2021
- *CVPR is the premier Computer Vision (CV) AI conference with an h5-index of 299 (5th among all academic journals/conferences); ICCV is the 2nd most prestigious CV conferences with an h5-index of 176*

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

Volunteering Experience

EuroPython 2020 : *Speaker* 24 Jul 2020
- Talk (30 min): 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 (30 min): Julia – Looks like Python, feels like Lisp, runs like C/Fortran (https://youtu.be/VKcwnHJm2V0)

Python Conference Hong Kong (PyCon) 2020: *Speaker* 8 May 2020
- Talk (30 min): Fighting COVID-19 with Machine Learning (https://youtu.be/cd1j25JxOJc)

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

Awards & Recognition

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)

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

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

International Symposium on STEM Education 2019: Best Project Champion, Outstanding Performance Award, Academic Scholarship 25 – 28 Jul 2019
Microsoft, The University of Hong Kong & HKU Academy for the Talented

The 5th International Mathematical Modelling Challenge: First-class Honours (International Round + Greater China Winter Contest), Second-class Honours (Greater China Autumn Contest) Aug 2020
International Mathematical Modelling Challenge

22nd Hong Kong Youth Science and Technology Innovation Competition: 2020
Champion in Computer Science & ICT division, Bull B. Tech Special Award, Academic Scholarship
HKNGCA Science Innovation Centre

The SciTech Challenge: Champion, Best Presentation Award, Seed Funding 2019
Hong Kong Science Park and Arrow Electronics

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

Technical Skills

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