Sai wo Ringo Chu

(Hidden)

+44 7493030093 | ringochu1997@gmail.com | www.ringoswchu.com

Education

University College London, Department of Computer Science — London, United Kingdom

MEng (with BSc) in Computer Science with First Class Honours — *09/2016 - 07/2020*

- Completed Software projects in collaboration with British Library and the NHS.
- Thesis topic: "Neural RGB+D̂ Object Tracking with Depth Estimation"

Harvard University, School of Arts and Sciences — Cambridge Massachusetts, United States

Summer exchange student — *06/2017 - 08/2017*

- Studied Behavioural, Cognitive and Clinical Psychology.

Employment History

SenseTime Research and Tetras.AI — Hong Kong

Research Resident — *08/2021-04/2023*

- Implemented a self-supervised frame-event stereo matching systems
- Proposed Transformer network with Rectanglar Epipolar Shift Windows for Stereo Cost and Matching.
- Rolled out experiements on industrial use case and bechmarks for demonstrating network robustness.

Lukadvisor LTD - A Start up company — Hong Kong

Research Software Engineer — *10/2020-08/2020*

- Researched into using Transformer as a Look-Up-Table to solve visual relation detection within an image.
- Delivered a application that automatically track and label dolphin behaviour with underwater drone.

Intel Corporation and Imperial College London — London, United Kingdom

Research Intern — *06/2020-10/2020*

- Worked on accelerating Sim-to-Real robotic arm control.
- Exploited fixed-point for Sim2Real domain randomization.

Research Intern — *05/2019-10/2019*

- Designed an artificial stock market to model financial inflation and herding using agent-based approaches.
- Performed probabilistic clustering and analysis for optimisation.
- Utilized OpenCL for exploring efficient parallel scheme of the market model on multi-core Intel Xeon CPU.

Dyson Ltd — Malmesbury, United Kingdom

Robotic Software and Research Intern | Intelligent Machine Team — *06/2019-09/2019*

- Researched into fast monocular egomotion estimation using optical flow and real scale approximation.
- Integrated research findings with Dyson Eye 360 and software suite using ROS for accuracy evaluation.

Imperial College London — London, United Kingdom

Undergraduate Researcher | Custom Computing Group, DoC — *06/2018-12/2018*

- Designed and implemented 3-dimension convolutional neural networks for airborne and satellite imaging.
- Synthesized the model on an embedded FPGA with an optimised architecture for algorithmic acceleration.

Selected Publications

Ringo S.W. Chu, Wayne Luk A Minimalist MLP is a Strong Baseline for Hyperspectral Image Classification. *In Submission, ICASSP 2024*

Ringo S.W. Chu, Jinjin Gu, Jimmy S. Ren. Epipolar Shifted Rectangular Window Transformer for Stereo Matching. *In Submission, AAAI 2024*

Jinjin Gu, Jinan Zhou, **Ringo S.W. Chu**, Yan Chen, Jiawei Zhang, Xuanye Cheng, Song Zhang, Jimmy S. Ren. Self-Supervised Intensity-Event Stereo Matching. *Electronic Imaging 2023* , Jan 2023, San Francisco, US

Ho-Cheung Ng, Shuanglong Liu, Izaak Coleman, **Ringo SW Chu**, Man-Chung Yue, Wayne Luk Acceleration of Short Read Alignment with Runtime Reconfiguration. *International Conference on Field-Programmable Technology*, Dec 2020, Virtual

Ringo S.W. Chu, Ho-Cheung Ng, Xiwei Wang, Wayne Luk. Convolution Based Spectral Partitioning Architecture for Hyperspectral Image Classification. *International Geoscience And Remote Sensing Symposium,* July 2019, Yokohama, Japan

Shuanglong Liu*, **Ringo S.W. Chu***, Xiwei Wang, Wayne Luk. Optimizing CNN-based Hyperspectral Image Classification on FPGAs. *Applied Reconfigurable Computing*, April 2019, Darmstadt, Germany (* denotes equal contribution)

Skills

Programming Languages: Proficient in Python, C++/C, Java, SQL; Familiar in MatLab, Lua, Golang
Framework and tool: Angular, React, TensorFlow, PyTorch, NumPy, OpenCL, OpenCV, ROS, GCP, JIRA
- Fluent in English, Cantonese, Mandarin; Basic knowledge in Korean

Leadership and Volunteering Experience and other Activities

UCL Public Affairs & Social Services Society (PASS) | Project Coordinator, Advisor

- Helped organising event "Amazing Raise 2019", "Amazing Raise 2018" and "Amazing Raise 2017"