

SAI WO RINGO CHU

Work from Home

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EDUCATION

- University College London, Department of Computer Science** London, United Kingdom
MEng (with BSc) in Computer Science 09/2016 - 07/2020
- Achieved First Class Honours
 - Thesis topic: "Neural RGB+D Object Tracking with Depth Estimation"
 - Completed Software projects in collaboration with British Library and the NHS.
- Harvard University, School of Arts and Sciences** Cambridge Massachusetts, United States
Summer exchange student 06/2017 - 08/2017
- Assisted in experimental psychology researches
 - Studied Behavioural, Cognitive and Clinical Psychology.

WORK AND PROJECT EXPERIENCE

- Intel Corporation and Imperial College London** London, United Kingdom
Researcher 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.
 - Results were led to two publications and presented at major international conferences. (See below section)
- Fubon Bank (Hong Kong)** Hong Kong
IT Audit Intern | Internal Audit Division 08/2017-09/2017
- Developed SQL tool to query audit cases; Identified potential cyber security risks within the bank.

SELECTED PUBLICATIONS

- 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, 2020
- Martin Ferianc, Hongxiang Fan, **Ringo S.W. Chu**, Jakub Stano, Wayne Luk. Parameter Estimation for FPGA-Based Accelerators for Convolutional Neural Networks. In proceeding of *Applied Reconfigurable Computing*, 2020
- 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" and "Amazing Raise 2017"
 - Co-coordinated annual "Amazing Raise 2018", a charity event for raising mental illness awareness.
 - Debate coach for the PASS Inter-varsity Debating forum on media and information legal issues (Feb 2018).
- Participant of Jane Street Estimation 2020, Oxford