

Kwing-Hei Li

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SUMMARY

I am a third year undergraduate Computer Science student who is greatly interested in the design, implementation and verification of tools for software engineering and programming languages, through techniques from Type Theory, Mathematical Logic and Category Theory.

EDUCATION

Churchill College, University of Cambridge

2019 – 2022

Bachelor of Arts in Computer Science with Mathematics

United Kingdom

- Dissertation: Eva – Type Systems for Functional Reactive Programming (In Progress)
Supervisor: Prof. Alan Mycroft (am21@cam.ac.uk)
- Part IB: Class I (Rank 2/123)
1st place in both Paper 4 (Programming Languages) and 6 (Theoretical Computer Science)
- Part IA: Predicted Class I (Unclassed)

EXPERIENCE

Undergraduate Research Intern and Visitor

July 2021 – June 2022

University of Cambridge Machine Learning Systems Lab

United Kingdom

- Salvia – Secure Aggregation for Federated Learning in Flower
Supervisors: Dr. Nicholas Lane (ndl32@cam.ac.uk) and Dr. Pedro Porto Buarque de Gusmao
- Designed and implemented a secure aggregation protocol feature based on the SecAgg and SecAgg+ protocols for Flower, a Federated Learning Framework
- Project results ([PDF](#)) in proceeding of the 2nd International Workshop on Distributed Machine Learning

Automation Engineer Intern

July 2020 – August 2020

DreamsAI

Hong Kong

- Implemented scripts for extensive data extraction from web for training data of neural networks
- Designed and built pipeline to analyze clients' order emails using neural network and regex
- Implemented scripts to automate transferring data from MySQL tables to PostgreSQL

AWARDS & ACHIEVEMENTS

Beatrice Blore-Browne Prize Scholarship	2021
Churchill Prize Scholarship	2021
Churchill Computer Science Talks Series – Audience Favourite Talk	2021
• Understanding the Source Coding Theorem: A Talk on Shannon's Entropy	
Churchill Honorary Scholarship	2020
Country-to-Country Capture the Flag – 5th place	2020
Cambridge STEP Paper 1, 2 and 3 – Grade 1, 1, S, respectively	2019
The Tony Wong Memorial Scholarship for a boy who excels in Information Technology	2019
Hong Kong Youth Science & Technology Innovation Competition	2018
• Intel Excellence in Computer Science Award	
• Silver Medal in Computer and Information Technology (Senior)	
Hong Kong Representative, Canadian Computing Olympiad – Silver Medal	2018
Hong Kong Representative, National Olympiad in Informatics – Bronze Medal	2017
Hong Kong Olympiad in Informatics Representative, ACM-ICPC Asia HK Regional Contest – Silver Medal	2017

ROLES

Computing Officer – Churchill College JCR Committee	2021 - 2022
Coxing Captain – Churchill College Boat Club	2020 - 2022
Captain – Diocesan Boys' School Olympiad in Informatics Team	2017 - 2018

OTHER

Skills: C++, Python, Java, OCaml, Haskell

Languages: English, Chinese(both Mandarin and Cantonese)

Other interests: Piano, Erhu, Coxing, Public Speaking