

Long Chung Chan **Harry**

FPGA RESEARCHER · EMBEDDED SOFTWARE DEVELOPER · ANDROID DEVELOPER · TECH ENTHUSIAST

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Education

UNIVERSITY OF WATERLOO

Sept. 2015 - Apr. 2020 (*expected*)

BASc, Electrical and Computer Engineering

Waterloo, Canada

May. 2020 - Apr. 2021 (*expected*)

MASc, Electrical and Computer Engineering

Waterloo, Canada

Academic Research

UWaterloo Configurable Architecture Group

University of Waterloo

UNDERGRADUATE RESEARCH ASSISTANT

Jan. 2019 - Aug. 2019

- Built simulation tool in Python for modeling specific memory structure to generate cycle-accurate read/write traces allowing estimation on hardware performance before implementation
- Added new configuration allowing cycle-accurate simulation targeting UltraScale Architecture memory from Xilinx
- Researched in optimizing resource allocation on FPGA to achieve high throughput performance running Deep Neural Network

Real-Time Embedded Software Group

University of Waterloo

ENGINEERING PROJECT COURSE

Jan. - Apr. 2020

- Drafted reports about IT trends and Security issues on AhnLab Company magazine.

Work Experience

Envieta System LLC

Maryland, US

FPGA CRYPTO DEVELOPER

Aug. - Dec. 2018

- Implemented a post-quantum cryptosystem - CRYSTALS-Kyber on FPGA board using VHDL allowing future-proof security standard to increase product value
- Verified the implementation on DE10-Nano board with the SoC Linux system running custom C drivers to assure it fulfills run-time requirements and security standards
- Piloted the usage of multi-port memory allowing a 4x speed up on the system's critical path

Sensibill Inc.

Toronto, CA

ANDROID DEVELOPER

Jan. - Apr. 2018

- Integrated a smoother UI experience allowing the user to capture longer receipts by using shape and contour detection in OpenCV, resulting in better image quality and more accurate data extraction from the receipt
- Redesigned receipt capture function using Kotlin from scratch for higher readability and cleaner code

Ritual Technologies Inc.

Toronto, CA

MOBILE DEVELOPMENT ENGINEERING

May. - Aug. 2017

- Accomplished smooth transition to Android Oreo by restructuring notifications using Notification Channels and adding AutoFill onto the sign-in flow
- Designed in-app add-ons allowing switching between testing server to visualize in-progress features in the compiled application, resulting in 30% shorter development time of new features

Ritual Technologies Inc.

Toronto, CA

TEST ENGINEERING

Aug. - Dec. 2016

- Engineered a chrome extension automating ticket dispute report process with Stripe. Inc, reducing operations time by 70%

Skills

Programming Languages	Python, C/C++, JAVA, Kotlin, VHDL, Verilog
Web	Django with Python, React
Tools	Docker, Adobe PhotoShop, Adobe XD
Languages	English, Madarin, Cantonese