Jason Ho

chekfung.me | chekfung | jason_ho@brown.edu | chekfung | 401-965-7728

EDUCATION

Brown University **Providence, RI**
Sc.B. in Computer Engineering, ***GPA: 3.90*** *Expected May 2022*

- *Relevant Coursework*: VLSI Design, Linear System Analysis, Digital Electronics Systems Design, Computer Systems, Design and Analysis of Algorithms

EXPERIENCE

Develop for Good **Remote**
Project Manager and Team Lead *September 2020 - Present*

- Volunteering for CARE International on analysis and visualization of USAID Hamzari data
- Supervising a team of 6 Frontend, Backend, UI/UX developers, and Data Scientists

Nabsys **Providence, RI**
FPGA Engineering Intern *June 2020 - September 2020*

- Fabricated signal processing algorithms and state machines on Xilinx Kintex FPGA for analysis of tagged DNA for whole genome sequencing
- Optimized FPGA design to significantly reduce slices used, allowing for 16x parallelization of algorithms, considerably increasing throughput to process real time streaming of hundreds of sensors
- Verified FPGA design with C++, Python, and timing analysis through Vivado

Brown University CIS **Providence, RI**
Security Engineering Intern *April 2019 - September 2019*

- Designed Copyright Infringement Script in Python that parsed DMCA emails, searched firewall logs and verified infringement on University traffic, saving non-technical staff over 3 hours of time per case
- Queried SQL databases to correlate Crowdstrike data with firewall permit-deny traffic in real-time dashboards to display current state of malicious traffic by optimizing firewall parsing by 20 times using Regex

PROJECTS

Multicycle 32 bit MIPS Processor *Present*

- Developing MIPS style processor for ARM Thumb Instructions written in Verilog and deployed on a Xilinx Spartan 3 FPGA development board.

ARM Core Fitness Monitor *May 2020*

- Prototyped on a STM32 board ARM processor running freeRTOS to manage sensor data collection threads and threads to compile data with FIFO Queue buffers.
- Integrated a optical heartrate sensor, spO2 sensor, accelerometer, and gyroscope with the ability to double tap the device to switch between modes using signal processing of the accelerometer.

ReadMe *January 2020*

- Planned and oversaw creation of a multipurpose accessibility android app written in Java that uses augmented reality and Google Cloud's Firebase mlkit to overlay dyslexic friendly font in the camera preview using real time OCR data processing with multiple foreign language support.
- Implemented text bounding box algorithms and custom font support whilst managing three other team members.
- **Awarded Best Use of Google Cloud at Hack @ Brown 2020**

SKILLS AND INTERESTS

- **Programming**: Verilog, Python, Java, C, C++, SQL, x86 Assembly, ARM Assembly, MATLAB
- **Tools**: GIT, Linux (Debian), Xilinx Vivado Toolchain, Solidworks, SPICE
- **Languages**: English (Native), Cantonese (Native), Spanish (Intermediate)
- **Interests**: Tennis, Classical Piano, Cooking, Reading