Lam Hoang

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Technical skills

Programming Languages: C, C++, CMake, Bash, Java, Python**,** Verilog, ARM Assembly**,** JavaScript, HTML

Software Knowledge: Microsoft Visual Studio, Qt Creator, Arduino IDE, ModelSim, Quartus II, Intel Monitor Program, JUnit, Valgrind, Bootstrap 4, Apache 2, Git, Mercurial, Microsoft Office Suite, Windows OS, Linux (Ubuntu)

Hardware/Lab Knowledge: Soldering, Logic designing, Bread-boarding, Operating lab equipment (Oscilloscope, Multimeter, etc.), Preparing & Presenting lab reports

Education

University of British Columbia   **September, 2016 – May, 2022**
Bachelor of Applied Science - Computer Engineering
Co-op: Completed 4/4 work terms
Key Computer Engineering Courses:

- Operating Systems (81% average)
- Digital Systems Design (84% average)
- Intermediate Algorithm Design and Analysis
- Principle of Software Construction

Work Experience

Avigilon (Motorola Solutions), Vancouver BC, Canada   **May, 2020 – Sept, 2020**
Firmware Developer Coop

- Assisted senior developers with release services for H5A Rugged PTZ, H5A-PTZ camera lines
- Implemented new features on new firmware releases
- Contributed towards maintaining code base; debugging issues, escalations on legacy camera lines
- Assisted other teams on running unit tests, setting up prototypes and researching

Avigilon (Motorola Solutions), Vancouver BC, Canada   **Jan, 2020 – Dec, 2020**
Firmware Developer Coop

- Assisted senior developers on bringing up H4 Thermal Elevated Temperature Detection, H5 Pro camera lines
- Implemented new features on new firmware releases
- Contributed towards maintaining code base; debugging issues, escalations on legacy camera lines
- Assisted other teams on running unit tests, setting up prototypes and researching

Technical Projects

TetriBASS, University of British Columbia   **June, 2020 - Present**

- Devised a Tetris web game using React and TypeScript
- Collaborated with two other colleagues in order to design the project's testing sequence, interface, functionalities and manage the workflow under an Agile environment

- Contributed on implementing the game's basic logic, interface and fixing bugs

RC Car, University of British Columbia 							**March, 2020**
- Personal project on implementing a low-budget version of a remote control car using Arduino. C/C++
- Implemented using Arduino Uno for main controller and ESP3266 wifi shield integrated with AT commands for remote control functionalities
- Devised remote control functionalities using TCP socket

Brick Breaker Game, FPT Telecom, IOT Department 							**August, 2019**
- Devised a simple game on a development kit running on ARM Cortex-M3 (STM32L)
- Implemented program using Qt Creator and Object-oriented C/C++ (GNU Arm Embedded Toolchain) based on Event-Driven Architecture
- Integrated the program into a written framework called Active Kernel
- Ensured program's stability by using Valgrind to carefully fix any memory leakage and inspected debugging logs to detect any long-running task that might enable fatal errors

ARC4 Decryption, University of British Columbia 							**June, 2019**
- Devised an ARC4 Decryption Circuit in SystemVerilog.
- Deployed and tested on a DE1-SoC board running on ARM Cortex-A9 using Quartus II 17.1
- Implemented the circuit strictly under Handshaking (Ready-enable) Microprotocol and using RAM blocks from Quartus II 17.1's on chip memory generation
- Ensured program's correctness using Intel Monitor Program to read system's HEX memory along with a self-written Python program to decode encrypted messages from HEX to ASCII
- Confirmed program's stability using self-written testbenches in SystemVerilog and ModemSim to inspect waveforms

Volunteer Work Experience

FPT IOT Department (FPT Telecom), Ho Chi Minh City, Vietnam 							**July, 2017 – August, 2017**
Intern
- Worked with an instructor to understand more about embedded systems, object-oriented C/C++ programming and various applications/prototypes the company offers
- Designed two embedded games based on a provided framework called Active Kernel on an embedded development kit running on ARM Cortex-M3

FPT Play (FPT Telecom), Ho Chi Minh City, Vietnam 							**July, 2017 – August, 2017**
Movie Translator, Content Reviewer
- Collaborated with Content Team of seven professional colleagues in the field of Communication and Media to manage the content of FPT Play's webpage
- Translated Vietnamese subtitles for various Asian movies and managed the Summary and Review sections of a Chinese TV series
- Updated and verified the live schedules of various TV shows that were running on FPT Play's webpage

Awards

UBC 2020W Dean's Honour List 							2020

UBC First Year Dean's Honour List 							2017

Outstanding International Student Award 							2016