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, 2021 – Sept, 2021**
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

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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

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Awards

UBC 2020W Dean's Honour List   2020

UBC First Year Dean's Honour List   2017

Outstanding International Student Award   2016