Wang Wang

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Skills Summary

Programming Languages: Assembler, C/C++, C#, Java, MATLAB, Python, VHDL
IDEs: Visual Studio, Eclipse, Keil, Unity
Tools/Frameworks: Android Development, Arduino, Git, OpenCV, MEX, Raspberry Pi
CADS: AutoCAD, DipTrace, Multisim, Fritzing, SolidWorks

Education

University of Waterloo, Waterloo, ON Spring 2020
Bachelor of Applied Science, Computer Engineering
Dean's Honours List Winter 2015, Winter 2016

Work Experience

Firmware Engineering, Infinera, Ottawa, ON Winter 2017

- Optimized (C++) source code implementations to reduce runtime (up to 30%) and improve accuracy (up to 10 dB in SNR) of fixed-point fast Fourier transform functions
- Used Eclipse-based IDE hardware simulator to create and automate Makefile based unit tests
- Created Visual Studio projects to build MEX files to allow for usage and testing of C++ programs in MATLAB

Puzzle Engineering, Escape Games Canada, Toronto, ON Spring 2016

- Designed, programmed, built, debugged, and installed Arduino based embedded systems (e.g. keypad sequencers, electromagnetic locks, RFID readers, and illuminated pressure plates)

Project Experience

RoboHacks Winter 2017

- Used the Leap Motion Python API to control a robotic arm based on hand positioning and gestures

Hack the North Fall 2016

- Created Python script to automate the selection of Tinder users based on facial recognition

Android Chess Application Spring 2016

- Created a fully functional chess game for Android mobile (Java) with user friendly features such as tile highlights, unlimited undos, resets, automatic saving and reloading of game states

Interactive Floor Display Spring 2016

- Manufactured, assembled and wired hardware for 160 sq. ft. of illuminated pressure plates
- Setup I2C bus between Pi master and Arduino slaves to transmit color and switch states
- Installed and interfaced Arduino Ethernet clients with Rasperry Pi LAMP server

Personal Face Filter Spring 2016

- Program superimposes the modified mask image onto the region of interest containing the face
- Implemented basic image processing concepts with OpenCV and C++

University of Toronto Hacks Winter 2016

- Created a 4x4x4 game of Tic-tac-toe in Unity (C#) that uses Leap Motion's hand motion and gesture recognition to provide a 3D interactive user interface