

PROFESSIONAL

Pivotal Labs

Software Developer

Jan - Apr 2017

- Developed 3 iOS apps for a Fortune 10 client with Swift, Objective-C++, and Cocoa Touch
- Completely redesigned a navigation applet and eliminated over 80% of navigation bugs
- Created and optimized *Concourse* CI/CD pipelines to decrease testing times by 30%
- Led the initial research and development of a concierge reservation applet
- Faithfully used test-driven development while pair-programming with mature full-times

Tests Developer

May - Aug 2016

- Verified daily stories on 2 Android/iOS projects in an agile development environment
- Pair-programmed over 20 Espresso, Earl Grey, Cedar test suites for 3 mobile applications
- Setup automated Espresso tests for Android for use in a *Concourse* CI pipeline
- Worked on multiple projects on a weekly basis to deliver high quality apps to clients

Institute for Quantum Computing

Research Assistant

Jan - Apr 2016

- Assembled Czerny-Turner monochromator with Waterloo professor supervision
- Self-taught 3D CAD with Autodesk Inventor; data analysis and visualization with MATLAB
- Designed and 3D-printed more than 15 plastic components and assemblies with Inventor
- Led the initial design of MATLAB application used to present spectrometer data
- Soldered and programmed Arduino and Motor Shield to control multiple stepper motors

City of Toronto

Application Developer

Jan - Dec 2015

- Created 3 server-based applications using Oracle APEX, JavaScript, and PL/SQL
- Developed SQL queries and workflows used by more than 500 Toronto Water employees
- Helped debug numerous applications and updated application documentations
- Provided technical service to Toronto Water and other City of Toronto facilities

TECHNICAL

- Collaboratively developing UNIX shell emulator using pure JavaScript, HTML, and CSS: jerrxu.github.io
- Moderate web/server development experience with PHP, Bootstrap, jQuery, SQL, and Git
- Experienced with iOS and Android development, worked on numerous apps for school, work, and personally
- Hardware programming: used Assembly ARM, VHDL, and C/C++ to program microcontrollers and FPGA boards
- Circuits experience: used oscilloscope, function generator, and SPICE software to analyze non-linear circuits
- Creative software: created lightsaber virtual-reality game using Myo Armband, Oculus Rift, and WiiMote

PROJECTS

Java and Android Programming

Sept 2012 – Present

- Created numerous Android Applications with Java in Eclipse and Android Studio
- Collaboratively developed Java programs, simulations, and 2D games with Greenfoot and Visual Studio
- Familiarized with various Android systems and APIs e.g. activity life cycles, sensor data processing

Waterloo Nano-Satellite Team

Sept 2014 – Present

- Developing power management system for the Canadian Satellite Design Challenge nanosatellite
- Working alongside power systems team to design and fabricate printed circuit boards using Eagle
- Cooperating with members of payload, ion thruster, and propulsion teams to optimize board layouts

EDUCATION

B.A.Sc. in Computer Engineering - University of Waterloo, Class of 2019

Courses: Operating Systems | Compilers | Embedded Microprocessors | Digital Hardware Systems

Programming Mentor of Computer Science and Robotics Club | **Violin Section Lead** of UWSO

Participant in: **HackWestern** | **NASASpaceApps** | **TerribleHacks**