Jake Nielsen

3B Mechatronics Engineering

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github.com/jknielse

Skills

Languages **C**, **C++**, **Objective-C**, Python, nodejs, Scheme, Assembly

Software and Technologies ROS, Visual Studio, **X-Code**, Vim, **Git**, Windows, Linux, **Mac OSX**

Embedded Systems Arduino, AVR Microcontrollers, I2C, Control Systems

Work Experience

Sept 2012 - Present **Mobile Software Engineering**,
Rebellion Media Inc., Waterloo.
Developing iOS applications
Received an **outstanding** on work evaluation
Writing backends using nodejs and mongoose
Troubleshooting hardware in the event of test failures
Configuring and uploading harddisk images to Sandvine's Policy Traffic Switches

Jan 2012 - Apr 2012 **Cofounder and Software Developer**,
Crouton Labs inc, Waterloo.
Making logical extensions to the vanila iOS SDK to allow for automatic serialization of objects, and intelligent implimentation of the dispatcher design pattern
Aggressive refactoring, resulting in the most readable and stable codebase that I've ever worked with.

May 2011 - Aug 2011 **Manufacturing Software Engineering**,
Sandvine Inc., Waterloo.
Writing and maintaining test scripts for quality control
Troubleshooting hardware in the event of test failures
Configuring and uploading harddisk images to Sandvine's Policy Traffic Switches

May 2010 - Aug 2010 **Software and Hardware Developer**,
University of Waterloo.
Sept 2010 - Dec 2010 Creating control systems for 200 stepper motors and reading from 200 pressure sensors
Implementing firmware, software, and GUI for an experimental CNC lathe
Producing firmware, software and pendant controller for a 3D scanner
Received an outstanding on the work report evaluation

Projects and Competitions

Computing Collective (Co-founder) Worked on start-up that planned to commercialize the volunteer based grid computing space, winners of the Velocity Venture Fund competition.
Involved in the software development of said platform in python.
We sell processing power that we acquire through CPU scavenging in return for game upgrades and free software.

VeloCity Entrepreneurial Incubator
(Resident)

Returning resident at VeloCity, which helps students who are working on start-ups, by providing funding, mentorship and a collaborative environment.

Education

2009 - Present

Candidate for Bachelor of Applied Sciences in Honours Mechatronics Engineering,
University of Waterloo.

Relevant Courses: Designing Functional Programs, RTOS, Sensors and Instrumentation, Elementary Algorithm Design and Data Abstraction, RCL Circuits, Ordinary Differential Equations, Mechanics of Deformable Solids, Physics: Dynamics, Microcontrollers and Digital Logic, Control Systems