Jake Nielsen

Mechatronics Engineer

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Skills

Languages	**Python**, Bash, **Swift**, **Objective-C**, C#, C, C++, JavaScript, Scheme, Assembly
Software	**Git**, SVN, Visual Studio, X-Code, Vim, Windows, Linux, Mac

Work Experience

Aug 2014 - Present — **Software Tools Engineer (Python, Swift)**,
Apple Inc, Cupertino.
Development and maintenance of Safari and WebKit's CI systems (driven by Buildbot).
Developed tool for locally testing the CI system (previously tested in-production).
Developed tool for machine provisioning to save developer time spent manually reimaging mac minis

May 2013 - Aug 2013 — **Firmware Engineer (C#, C++)**,
Virtium Inc, Rancho Santa Margarita.
Development of IPC library capable of up to 7GB/s throughput.
Further development of continuous integration unit testing for SSD firmware.
Received an **outstanding** on work evaluation.

Sept 2012 - Feb 2013 — **Mobile Software Engineering (Objective-C, Node.js, Mongoose)**,
Rebellion Media Inc, Waterloo.
Development of iOS apps from mock-ups.
App backend development.
Received an **outstanding** on work evaluation.

Jan 2012 - Apr 2012 — **Cofounder and Software Developer (Objective-C)**,
Crouton Labs Inc, Waterloo.
Developing iOS applications to allow restaurant customers to order and pay for food.
Ruthless attention to look-and-feel.
Received an **outstanding** on work evaluation.

May 2011 - Aug 2011 — **Manufacturing Software Engineering (TCL)**,
Sandvine Inc, Waterloo.

May 2010 - Aug 2010 — **Software and Hardware Developer (C++, VB.Net)**,
University of Waterloo.

Sept 2010 - Dec 2010 — Developing hardware and firmware for an experimental configurable 3D pressure-sensing surface.
Developing firmware, and software for an experimental 3-axis CNC lathe, and a 3D scanner.
Received an **outstanding** on work evaluation.

Projects and Competitions

Autonomous Boat — Designed the hardware, sofware, and PID control system for a boat capable of autonomously navigating a water-course.

Computing Collective (Co-founder) — Worked on start-up that commercializes the grid computing space, winners of the $25,000 Velocity Venture Fund competition.
Involved in the software development of said platform in python.

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

Education

2009 - 2014 — **Mechatronics Engineering**,
University of Waterloo.
Relevant Courses: RTOS, Sensors and Instrumentation, SISO Control Systems, MIMO Control Systems, Autonomous Mobile Robotics, Mechatronic System Integration