

# Jake Nielsen

4B Mechatronics Engineering

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## Skills

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

## Work Experience

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

Sept 2012 - Feb 2013 **Mobile Software Engineering**,  
*Rebellion Media Inc*, Waterloo.  
iOS development  
Backend development using nodejs and mongoose  
Received an **outstanding** on work evaluation

Jan 2012 - Apr 2012 **Cofounder and Software Developer**,  
*Crouton Labs Inc*, Waterloo.  
Developing iOS applications for restaurants  
Sales and marketing  
Received an **outstanding** on work evaluation

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

May 2010 - Aug 2010 **Software and Hardware Developer**,  
*University of Waterloo*.

Sept 2010 - Dec 2010 Developing hardware and firmware for an experimental configurable 3D 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, software, and PID control system for a boat capable of autonomously navigating a water-course without hitting the walls of the course

**Computing Collective** Worked on start-up that commercializes the grid computing space, winners of the Velocity Venture Fund competition.  
(Co-founder) 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 - Present **Mechatronics Engineering**,  
*University of Waterloo*.  
Relevant Courses: RTOS, Sensors and Instrumentation, SISO Control Systems, MIMO Control Systems, Autonomous Mobile Robotics, Mechatronic System Integration