

# Jake Nielsen

*Mechatronics Engineer*

3380 20th St

San Francisco, CA

☎ (408) 816-0751

✉ [jake.k.nielsen@gmail.com](mailto:jake.k.nielsen@gmail.com)

📄 [github.com/jknielse](https://github.com/jknielse)

---

## 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 Intern (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 Intern (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 Intern (TCL),**  
*Sandvine Inc*, Waterloo.
- May 2010 - Aug 2010 **Software and Hardware Developer Intern (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, software, and PID control system for a boat capable of autonomously navigating a water-course.
- Computing Collective** Worked on start-up that commercializes the grid computing space, winners of the \$25,000 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 - 2014 **Mechatronics Engineering,**  
*University of Waterloo*.  
Relevant Courses: RTOS, Sensors and Instrumentation, SISO Control Systems, MIMO Control Systems, Autonomous Mobile Robotics, Mechatronic System Integration