

# Nicholas Savile Robinson

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A Mechatronic Engineer educated in Software Development, Embedded Systems Design and Mechanical Engineering, experienced with Open-Source Web/Application Development, Highly Scalable Cloud-Based Systems, Linux Server Administration, Helicopter Piloting and Autonomous/Remote-Controlled Vehicles.

## Professional Experience

- Apple Inc. - Consumer Electronics/Software and Personal Computers, Cupertino, CA, USA** 2015 - Present  
**Senior Software Engineer, iWork for iCloud**
- Full stack development supporting www.icloud.com
    - Specializing in backend scalability, performance and reliability
    - Interfacing with internal infrastructure engineering teams
  - Managing internal testing/continuous integration infrastructure
- Apple Inc. - Consumer Electronics/Software and Personal Computers, Cupertino, CA, USA** 2012 - 2015  
**Software Engineer, OTA Special Projects Group**
- Requirements analysis, coordinating with interdisciplinary stakeholders
  - Full stack systems ownership: specification/implementation/support
  - Developing:
    - Native/Cross-Platform utility suites using Cocoa/XCode and Python/TkInter
    - Embedded software for device evaluation in Perl/Python/C/C++
    - Scalable web applications using Javascript/Django/PHP/Python/Perl/C
    - RESTful HTTP APIs for internal consumption and inter-departmental collaboration
  - Administering:
    - 20+ VMware vSphere(ESXi) server cluster
    - PHP/Python/Apache/MySQL application stacks
    - Multiple Storage RAIDs and backup solutions
  - Mentoring junior engineers
- Grab Games - Social/Mobile Gaming, Los Angeles, CA, USA** 2010 - 2012  
**DevOps Manger**
- Engineering massively scalable public-facing cloud-based systems catering to 3M+ MAU
  - Administering:
    - 50+ Amazon EC2 / Xen Cloud Platform private/public server clusters using Puppet
    - 30+ node sharded and replicated MongoDB clusters
    - Multi-node Nagios monitoring system and Cacti systems charting installation
    - Auto-scaling Node.js/Nginx/PHP-FPM stack tightly coupled with Jenkins CI
  - Designing/Implementing:
    - Core PHP/Javascript/AS3 frameworks
    - RESTful game service APIs/SDKs for internal and public consumption
    - Social Network agnostic OAuth2.0 Server/API/SDKs
    - Node.js load balancers
  - Internal development tools
  - Integrating Third-party/Social Network APIs
  - Managing subordinates
  - Mentoring junior engineers
  - Supervising:
    - Project deployment
    - Research, development and expansion

## Qualifications

- Bachelor of Mechatronic Engineering, University of New South Wales, Sydney, NSW, Australia** 2010
- Dean's Honors, First Class
  - Sun Microsystems Australia, Prize in Java Programming
- Commercial Pilot License (Helicopters), HeliWest, Western Australia** 2005
- Basic Aeronautical Knowledge, Western Australian Aviation College, Western Australia** 2005

## Technical Expertise

<b>Operating Systems:</b>	DOS, Windows, Linux (Debian, Ubuntu, CentOS, Fedora), Mac OS
<b>Virtualization:</b>	Amazon EC2, Xen Cloud Platform, Parallels, VMWare, Microsoft VirtualPC
<b>Architectures:</b>	AVR, ARM Cortex-M3/A8, PIC
<b>Databases:</b>	MongoDB, MySQL, PostgreSQL, Microsoft Access, Microsoft SQL Server, SQLite
<b>Languages:</b>	C/C++/C#/Cocoa/Cocoa Touch, Java, Ruby, VB, MIPS, Haskell, HTML, CSS, JavaScript, Node.js, PHP, ASP/ASP.NET, ActionScript 3.0, Python, Perl, VBScript, MATLAB, LabView
<b>Frameworks:</b>	Django, Ruby on Rails, CakePHP, Qt
<b>Design Suites:</b>	Adobe Flash, SolidWorks, CATIA, Pro/ENGINEER, RobotStudio, EaglePCB
<b>CMS:</b>	Drupal, Joomla, WordPress, osCommerce

## Active Web Portfolio

- Theta Chi Fraternity, UCLA Beta Alpha Chapter - Webmaster
  - <http://www.bruinthetachi.org>

## Open Source Involvement

- Creator of Sharp AQUOS “IP Control” Java Library and Web Application
  - <https://github.com/nicholasrobinson/SharpControlWeb>
- Creator of Arduino AHRS for LSM9DS0 using Madgwick/Mohony filter
  - [https://github.com/nicholasrobinson/LSM9DS0\\_AHRS](https://github.com/nicholasrobinson/LSM9DS0_AHRS)
- Contributor to CocoaRestClient - HTTP API Test Client for OS X
  - <https://github.com/nicholasrobinson/cocoa-rest-client>
- Creator of JR / Spektrum / Futaba BuddyBox PPM Audio Driver
  - <https://github.com/nicholasrobinson/BuddyBox-PPM>
- Creator of BoxeeBox Remote Control PHP SDK using JSONRPC
  - <https://github.com/nicholasrobinson/BoxeeBox-PHP-JSONRPC>
- Creator of BoxeeBox Remote Control PHP SDK using Boxee/XBMC Remote Control Interface (HTTP API)
  - <https://github.com/nicholasrobinson/BoxeeBox-PHP-RemoteControlInterface>
- Regular contributions to Buffalo Linkstation/KuroBox Debian Distribution
  - [http://buffalo.nas-central.org/wiki/Install\\_Debian\\_Lenny\\_on\\_Stock\\_Kurobox](http://buffalo.nas-central.org/wiki/Install_Debian_Lenny_on_Stock_Kurobox)
- Creator of XSens MTi-G module for Open Robot Control System
  - [http://git.mech.kuleuven.be/?p=robotics/xsens\\_hardware.git](http://git.mech.kuleuven.be/?p=robotics/xsens_hardware.git)

## Publications

Mark Whitty, Lin Chi Mak, Derek Taprell, Anselm Ma, Steven Lee, Cho Ying Ng, Nicholas Robinson, Harry Xiao, “Development of the MAVSTAR Micro Aerial Vehicle and Base Station for IMAV09”, 4th US-European workshop and flight competition for micro air vehicles (IMAV09), Pensacola, USA, 1-5 June, 2009. (Best Paper Award)

## Unmanned Aerial Vehicle Experience

<b>Cyber Technologies CyberQuad - Training Simulation Developer</b> <a href="http://www.cybertechuav.com.au">http://www.cybertechuav.com.au</a>	<b>2010</b>
<ul style="list-style-type: none"> <li>• Developed training package simulation software</li> </ul>	
<b>University of New South Wales MAVSTAR - Pilot / Engineer</b> <a href="http://www.robotics.unsw.edu.au/mavstar/">http://www.robotics.unsw.edu.au/mavstar/</a>	<b>2009 - 2010</b>
<ul style="list-style-type: none"> <li>• Competed at the 4th US - European MAV Flight Competition in Pensacola, Florida</li> <li>• Achieved 3<sup>rd</sup> place in the indoor competition</li> <li>• Achieved 1<sup>st</sup> place in the report and presentation competition</li> </ul>	
<b>Entecho Mupod - Test Pilot</b> <a href="http://www.entecho.com.au">http://www.entecho.com.au</a>	<b>2007</b>
<ul style="list-style-type: none"> <li>• Conducted preliminary flight tests with the Mupod prototype</li> </ul>	