

Daniel Johnson

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github.com/proverbialsunrise

Goal: To work with a team solving interesting problems in biomechanics and technology. I'm passionate about playing sports competitively and using technology to improve athlete performance or training would be my ideal role.

Skills

- **Development:** Objective-C/Cocoa, C/C++, Python, MATLAB, C#, Git
- **Modeling:** 2-D and 3-D Dynamics and simulation of biomechanical systems, control systems
- **Application Design:** Designed, built, and released applications for iOS, Mac, Windows, and the web: both in the workplace and on my own time.
- **Teamwork:** Enjoys working with others to excel in finding solutions to difficult problems.
- **Communication:** Excels at writing clear and concise documents and explaining ideas.
- **Learning:** Loves to learn new things and explore new areas of technology. Quick to pick up new skills and technologies as required.

Education

University of Waterloo

Masters of Applied Science - Systems Design Engineering

Waterloo, ON

2012-2014(*est.*)

- Created a comprehensive golfer swing model using MapleSim and Matlab for evaluating golf clubs. The model is optimally controlled to accomodate different simulated clubs.
- Delivered the completed model to an outside industry partner along with documentation on how to use and modify the model to evaluate golf clubs.
- Measured golfer motion and extracted swing information using portable EMG, IMU (Moven Suit), and motion capture (Eagle Vision infrared cameras) systems.

University of Waterloo

BASc - Honours Systems Design Engineering, Co-operative Program

Waterloo, ON

2007 - 2012

Work Experience

Apple Inc.

Software Engineering Intern - iOS Location Software

Cupertino, CA

Jan-Apr 2010 and Sep-Dec 2010

- Designed and implemented a testing framework for location algorithms on iPhones and iPads in the form of an iOS application, Mac application, and accompanying server-side code
- Developed an improved location algorithm using Kalman Filters for determining an iOS device's location in a particular type of environment

University of Waterloo (Vision and Image Processing Lab)

Research Assistant - vip.uwaterloo.ca/website-package

Waterloo, ON

May-Aug 2011

- Developed algorithms for processing SAR imagery of sea-ice in the Canadian North
- Implemented algorithms within existing image processing software in Visual C++.
- Supervised and assisted a co-op student building a website for the lab using Drupal resulting in a package for building research group websites that was released as open-source

Trimble Navigation

GPS Software Tester

Christchurch, NZ

May-Aug 2009

- Developed and performed experiments on software keyboards for mobile devices using C#.
- Developed micro-controller code for RF chamber test rig for handheld GPS devices.
- Tested hand held GPS devices for accuracy and interface usability.

CREZ Basketball

Software developer

Waterloo, ON

Jan-Apr 2007 and Sep-Dec 2007

- Developed statistics software for basketball coaches in Visual Basic .NET and C#
- Implemented client-side code for livestreaming basketball statistics to a web service.
- Packaged and released software to clients using InstallShield.
- Provided technical support through direct interaction with customers and written documentation

Personal Projects

Wedding Website

github.com/proverbialsunrise/weddingsite

nodeJS, Javascript, HTML & CSS

2014

pySTL

github.com/proverbialsunrise/pySTL

Python

2014

Simple Ultimate Stats (In Progress)

github.com/proverbialsunrise/ultimatestats

Objective-C

2013-

Hymnal Mobile Application

github.com/proverbialsunrise/hymnalapp

Objective-C, C++, Java

2010

Awards

- *Ontario Graduate Scholarship* - Sep 2013
- *NSERC Alexander Graham Bell Scholarship* - Sep 2012
- *NSERC Undergraduate Student Research Award* - May 2011

Personal

Crash Ultimate - KW Guelph Competitive Ultimate

Captain

crashultimate.ca

2013-

- Elected captain of National Championship winning team in 2014

Hobbies: Singing (A Cappella and Barbershop in particular), Ultimate Frisbee, Soccer, Basketball