

Charles Munson

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OBJECTIVE To obtain a software development or web programming position that utilizes a wide range of computer languages. Additionally working with the design, testing, and maintenance (software engineering) would be preferable.

EDUCATION **The University of Florida – Gainesville, Florida** 8/2004 - 12/2008
Bachelor of Science in Computer Engineering GPA 3.8, w/ honors

Georgia Institute of Technology 8/2010 – Present
Doctor of Philosophy in Electrical & Computer Engineering Degree In Progress

RELEVANT KNOWLEDGE**Environments:**

- ✓ Experienced in Linux, BSD and Windows environments
- ✓ Knowledgeable with Macintosh systems

Programming:

- ✓ Expert experience with Perl (10 years), PHP (10 years), JavaScript (11 years), and SQL
- ✓ Skilled with C/C++ (7 years), Java (6 years), JSON and AJAX (Web 2.0 design)
- ✓ Experience with assembly programming for various processors and microcontrollers (such as the MSP430 and 68HC12), including SPI communication
- ✓ Knowledge with Python, VBScript, QBasic, Pascal, ABAP (SAP), ASP.NET, Haskell
- ✓ Graphical interface (GUI) programming using Java AWT and Swing, and also in C with the GTK+ toolkit and Win32 API

Markup Languages:

- ✓ Expert knowledge of (X)HTML, DHTML and XML (including Atom and RSS)
- ✓ Highly experienced with document formatting and transformations using XSL/XSLT and CSS

Hardware:

- ✓ Reconfigurable computing with FPGA and CPLD devices in conjunction with VHDL and schematic design (Quartus)
- ✓ Circuit board (PCB) layout using Altium Designer (Protel)

Programs:

- ✓ Skilled with Visual Studio development (particularly with Visual Basic, Visual C++ and C#)
- ✓ Experience with Flash, PowerPoint, MySQL (9 years), PostgreSQL, Apache, IIS and OpenVPN
- ✓ Specialized in web design for various browser and platform niches
- ✓ Proficient with Photoshop, GIMP, various word processing programs, spreadsheets, among others

Standards/Protocols:

- ✓ Skilled in MIME formatting, especially for use with email parsing
- ✓ Knowledgeable with the TCP / IP protocol, Telnet, SSH, FTP, SFTP, etc
- ✓ Experience with POP3, IMAP and SMTP protocols

Skills:

- ✓ Experience with cross-platform networks
- ✓ Design with compatibility, accessibility and search engine optimization in mind
- ✓ Knowledgeable in creating VPNs (Virtual Private Network), particularly for secure

- networking, including NAT and firewall setup
- ✓ Security-oriented design, including encryption and protection from code injection, directory traversal and cross-site scripting (XSS)
- ✓ Very fast learning with computers for quick familiarization with new environments, programs, and languages.

EXPERIENCE **The Global Aircraft Organization** (August 2000 – Present)

-- GlobalAircraft.org

Founder, head webmaster

- ✓ Maintain large-scale website
- ✓ Coordinate volunteers' activity and help visitors with various questions, suggestions and problems
- ✓ Built and maintained efficient database structures for storing data for thousands of members
- ✓ Devised numerous plans to maintain the security of the system and member information
- ✓ Optimized the formatting and execution of scripts to easily handle over a million page views each month

Iungam Search Engine Suite

-- search.GlobalAircraft.org

Inventor, designer, and webmaster

- ✓ Designed suite of specialized search engines and web crawlers
- ✓ Created and maintain database to store search engine data

Gjye 4GL Programming

-- Gjye.com, galire.GlobalAircraft.org

Inventor, designer, and webmaster

- ✓ Conceptualized the Gjye language, its behaviors and structures
- ✓ Engineered requirements and devised Perl-based prototype to Gjye (GALiRe)
- ✓ Began writing the finalized C++ implementation

Eta Kappa Nu (August 2007 – December 2008)

-- www.hkn.ece.ufl.edu

Webmaster and officer

- ✓ Cleaned up server and code, brought website up to XHTML 1.1 specifications
- ✓ Maintain website on a regular basis
- ✓ Constructed database back-end, automated calendar and photo album
- ✓ Set up membership area (MyHKN) allowing candidates to view their current hours

Hydra Project (January 2008 – December 2008)

Software and hardware developer

- ✓ Wrote software daemon in C that interfaces with USB sensor device and MySQL database for both Windows and Linux
- ✓ Designed Java software and GUI for monitoring hardware sensors from a third party computer
- ✓ Helped to program sensor hardware (built around an MSP430 uC) and design PCB for sensor hub in Protel
- ✓ Aided in development of protocols for sensor-to-hub and hub-to-computer communication
- ✓ Finished project for senior design course

TymTo Application (March 2008 – June 2008)

Software developer

- ✓ Started writing software for the Nokia N800 in C using the GTK+ toolkit and Hildon

MIT: Lincoln Laboratory (June – August 2008)

Summer Intern (HR and Group 64 -- Advanced Satcom Systems and Operations)

- ✓ Worked with Human Resources, further developing presentation and customer interaction skills

- ✓ Researched feasibility of developing a system to find highly-skilled diversity candidates in an automated fashion
- ✓ Studied SAP (and HR ABAP) in order to develop user-friendly, custom reports of employee training records
- ✓ Additionally worked with the Communications and IT division, helping to write the parser and message logger for their satellite communication software
- ✓ Obtained an interim government secret clearance

CHREC: High-performance Reconfigurable Computing (August – December 2008)

REU Scholarship Researcher

- ✓ Aided with development of RCML prototype – a graphical, system-level planning and simulation tool for exploring algorithm and architecture RC designs

Dynetics (February 2009 – July 2010)

Engineer III (Software development)

- ✓ SECRET government clearance, courier briefed
- ✓ Worked with C++ and VB.NET in order to help develop system to generate simulation input data
- ✓ Led development of congressional web application written in ASP.NET and C# (in Visual Studio), coupled with IIS and PostgreSQL
- ✓ Taught 'Advanced Web Development and Regular Expressions' company course

Georgia Institute of Technology (August 2010 – Present)

Graduate Teaching Assistant, Opportunity Research Scholars Mentor

- ✓ Instructor and Assistant for Circuits I – give lectures, exams, quizzes, homework and oversee lab periods
- ✓ Teaching Assistant for Networking – aid in preparation of labs and projects
- ✓ Mentor in ORS and SURE programs – meet and consult with undergraduate students working in research lab (and remotely in Atlanta), help to oversee project

BACKGROUND I have been working in web software engineering for over eleven years, and have mastered (X/D)HTML, PHP, Perl, XML (and XSL/XSLT), JavaScript, (My)SQL, CSS and many other web design-based languages. Standards compliance (W3C) and clean programming are of high importance. Over time I have learned to quickly and cleanly develop web pages and programs with tight deadlines. I also design websites and programs with compatibility and security in mind; I have, for instance, spent much time studying SQL injection and cross-site scripting (XSS) methods in order to protect against them.

I also have seven years of experience in applications programming, primarily with C, C++ and Java. Some software development models I have worked with include Extreme Programming, the waterfall model, iterative, evolutionary, and spiral development. Additionally I have studied various design patterns in order to further my abilities in system planning and design. I can work strongly in both a team environment and independently.

I am the manager and webmaster of GlobalAircraft.org (Global Aircraft Organization), as well as the webmaster and creator of the Iungam (search.globalaircraft.org) search engine and crawler suite, the Gjye programming language (gjye.com), the GAINe encryption program (on Global Aircraft), a web-based email interface (written in GALiRe), and various other technologies. I have created both company and personal websites and am experienced with hosting (HTTP/FTP) and setting up servers with Perl, PHP, PostgreSQL / MySQL and Apache technologies (particularly the LAMP infrastructure).

Currently I am studying Ruby, Python and Haskell in order to broaden my options when choosing a language for design.