

Contact Information

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Citizenship: U.S. Citizen
Occupation: CIO of Cyber Operations, LLC

Career Objectives

I enjoy doing web development, applications development, or system administration. I'm comfortable in either small-shop environments or big corporations, and can adapt my expertise to an extremely wide variety of situations. I would prefer positions in a medium to large city, with good medical benefits and direct deposit.

I prefer to have some direct access to those who use my work, both for feedback and encouragement. I'm a huge team player, and enjoy brainstorming with peers. I'm very even-tempered, even in the midst of urgency.

Qualifications

- Excellent written and oral communication skills with non-technical people
- A belief in programming as a craft to master, not just a job to pay the bills.
- An attitude that computers (and programmers) should serve the needs of people, not the other way around.
- Dedication to keeping abreast of new technologies that might benefit the users of the systems I design.
- Communications protocols and high-security encryption algorithms
- Plug-in and shared library architectures
- 2D image processing and 3d rendering techniques
- Cognitive modeling
- Biometrics and security policies
- MS Windows and Unix systems administration

Experience

- 14 years C programming
- 13 years Classic MacOS programming
- 9 years Unix programming
- 5 years MS Windows 2000 and XP programming
- 8 years Linux system administration
- 8 years web application design and implementation
- 4 years XML processing and design experience
- 9 years web design using HTML, Javascript, and CSS (Cascading Style Sheets)

- 10 years C++ programming
- 5 years Common Lisp programming
- 6 years Perl programming
- 5 years Ruby programming
- 6 years SQL programming (Oracle, MySQL, and PostgreSQL)
- 6 years PHP programming

Employment History

Jan 2007-Present: Developer at Sungard, Inc.

- Primary developer of security system upgrade to PlanOffice, allowing more convenient and secure authentication to the WebSuite family of products. (C++, Oracle, SQL)
- Contributed documentation to the PlanOffice project, allowing new hires to get up to speed much more quickly. (MediaWiki)
- Implemented database lookup optimization resulting in speedier operation of the PlanOffice web application. (C++)

Sep 2004-Jan 2007: CIO at [Cyber Operations](#)

- Primary company network and system administrator, technical support, and technical advisor.
- Designed, constructed, and maintained web hosting service with centralized LDAP authentication, web server, email, and ftp (Apache, OpenLDAP, Postfix, ProFTP)
- Wrote software for the administration of the web hosting service by other company personnel. (Ruby)
- Designed, constructed, and maintained internal services, such as databases, file shares, firewalls, and routers (MySQL, Postgresql, samba, Netgear, Cisco, SMC)
- Wrote in-house software to handle company-wide backups and automatic updates of UNIX systems (Ruby, sh, Common Lisp, C)
- Assisted in remote installations and support, including [DISA](#)
- Helped implement [CyberSAM](#), a door lock system using smart cards and biometric authentication (C++, PHP)
- Added Cisco PIX, Juniper, and Netscreen support to [ACL Manager](#) (Cisco, Juniper)
- Featured as data storage expert on evening news at [WVTM](#) NBC Channel 13 in Birmingham
- Designed, constructed, and maintained medical application for health measurement tracking and analysis. (C++, Ruby on Rails)

Oct 2002-Sep 2004: Research Associate and Sysadmin at [INST](#) of [Mississippi State University](#)

- Built nine out of twelve 3d environments for use in research regarding metrics for team performance. (Half-Life, Valve Hammer, Windows)
- Optimized and refactored implementation of a cognitive model for simulation of novice and expert pilots. Resulting application was up to 600x faster than the original and easier to maintain. (Solaris, LISP)
- Designed and implemented software to generate a knowledge base for a cognitive model to simulate the thought processes of a human pilot. This "knowledge scoring engine" was able to

- generate a possible patent for the university.(Solaris, LISP)
- Implemented software to gather and synchronize experimental data from a flight simulator and oculometer. This hooked into the knowledge scoring engine and cognitive model, combined with a tutoring system to provide real-time dynamic tutoring. (Windows, Visual C++)
- Assisted in system administration and managed junior administrators for 30+ computer lab. (Windows, Mac OSX, Solaris)

Jan 2000-Oct 2002: Applications Developer at [MCI/WorldCom, Inc.](#)

- Designed and implemented corporate intranet cookie-based secure authentication module for Apache. This was completed on a two-week deadline and was the company's authentic for its main intranet portal for years. (C, Unix)
- Implemented cross-platform, peer-to-peer, strong encrypted enterprise instant messaging system. (C++, Unix, Windows, Macintosh)
- Wrote web-based payroll analysis system which enabled my department to find discrepancies in working and vacation hours. (HTML, Perl, PHP, Oracle, SQL)
- Constructed and administrated web log analysis facility which served as the main analysis for years. It analyzed over 2GB of log files every day, generating customizable graphs and reports for every site and sub-site on the wcomnet intranet. (C++, Perl, HTML, PHP, Solaris)
- Implemented and maintained web server/LDAP status monitoring and alert facility, enabling us to detect and recover quickly from network and server failures. (Perl, Bash, Unix)

Jan 1997-Mar 1999: Senior Developer at [BoxTop Software](#)

- Implemented a great deal of GIFmation 2.0, the premier animated GIF construction program. (C++, MacOS Classic)
- Created concept, design and implementation of the first version of what was known as "Autotyper," "Typer," and "Fileomatic."
- Implemented Adobe Photoshop plugins for maximizing compression while saving files.
- Assisted in porting C++ software from Macintosh to Windows
- Assisted in Unix system administration
- Wrote in-house registration number generating system (C, MacOS Classic)
- Designed and implemented in-house online ordering system (C++, MacOS Classic)

Conference Papers

- Jodlowski, M., Carruth, D. W., Lowe, D., & Doane, S. M. (2003) Knowledge Scoring Engine (KSE) for Real-Time Knowledge Base Generation. *Proceedings of the 12th Conference on Behavior Representation in Modeling and Simulation*, (pp. 435-437), May 12-15, Scottsdale, AZ.

Other Accomplishments

- Was head administrator and main coder for the text-based virtual reality game [TempusMUD](#) (C++, STL, XML, PostgreSQL)
- Wrote community blogging software for [Digital Sanctuary](#) (C, Ruby, Perl, PostgreSQL, Apache)
- Wrote the text-based virtual reality codebase Unity (Common Lisp)

- Wrote codebase for a text-based virtual reality environment, "Forgotten Sanctuary" (C++)
- Wrote 3d engine [Vivis](#) - a Ruby/C hybrid with server/client networking support.
- Wrote Open Transport version of a cross-platform networking language interface for [Catharon Productions \(C\)](#)
- Helped with version 0.0.8 of the open source project [root-tail](#) (C, Unix)
- Designed and constructed the website <http://www.friendsofwaller.org/> (HTML)
- Designed and constructed the website <http://www.luciafamily.org/> (HTML)
- Contributor to [cljsql](#) - an open source common lisp library (CL)
- Contributor to [cl-sdl](#) - an open source common lisp interface to [SDL](#) (CL)
- Wrote [hachet](#) - an HTML preprocessor for easy website maintenance and standards compliance. (Ruby)
- Wrote free implementation of [local-time](#), a Common Lisp library for manipulating dates and times. (CL)
- Wrote simplelist, a simple mailing list program with no offline controls. (Perl, Unix)
- Wrote holler, a distributed netcast system for internet radio stations. (C++, Ruby, Windows, Unix)
- Wrote rbcast, a non-distributed netcast system for internet radio stations. (Ruby, Unix)

References

- Bill Dunsford
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- Daniel Carruth
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