

# RÉSUMÉ of MICAH COWAN

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## ☞ QUALIFICATIONS SUMMARY ☞

### *Team Player, But Self-Reliant*

A seasoned team-player, I am as adept at handling a project entirely on my own, as I am collaborating with a group to get the job done. I have also been relied upon to take point in group endeavors..

### *Understand Algorithms*

I have a solid understanding of how to select the right algorithms and abstract data types to obtain results efficiently.

### *Knowledge from the Source*

Having spent time thoroughly studying the language specifications, I am particularly knowledgeable in standardized languages such as C & C++. However, I also understand the occasional necessity to abandon published standards when they diverge significantly from real-world implementations (as is frequently the case for web technology-related standards).

### *Security-Aware*

I am very aware of potential security issues at all times, in both applications programming and in network server configuration. I always seek to consider every method by which service abuse might be attempted.

### *Eager to Learn*

I have a deep thirst for self-education, and learn new skills rapidly.

### *Eager to Teach*

I have given instructional talks at local users groups, including topics on programming in Perl, C, and PostScript, and I have also given private tutelage at home in music and in computer programming.

## ☞ JOB SKILLS ☞

### **Operating Systems**

UNIX (GNU/Linux FreeBSD Sun OS) Windows (98 NT 200x XP) Mac OS HP-UX

### **Programming Languages & Technologies**

C C++ Yacc/Bison Lex/Flex Sed Awk Perl Python Bourne Shell Verilog  
Debian Packaging PHP ASP .NET POSIX CVS Subversion Git Mercurial Lisp XSLT  
GNU Autotools Make PostScript Visual Studio .NET COM

### **Web Technologies**

HTML XHTML CSS CGI Web Content Accessibility Guidelines Django  
Unicode ColdFusion DreamWeaver PHP JavaScript ECMA Script W3C DOM

### **Internet Protocols**

TCP/IP Telnet FTP HTTP WebDAV SMTP POP3 IMAP IRC SASL

### **Database Languages**

ANSI SQL MySQL PostgreSQL ODBC SQL Server

### **XML Technologies**

XML XSLT XSL-FO CSS DocBook SVG

### **System Administration**

UNIX shell scripting Apache Web Server Microsoft IIS Sendmail Qmail Squid  
Postfix ColdFusion server FTP daemons

### **Documentation & Typesetting**

T<sub>E</sub>X L<sub>A</sub>T<sub>E</sub>X DocBook Troff GNU Emacs Vim Word Excel OpenOffice PostScript PDF

### **Miscellaneous**

Cryptography Japanese Typography Music Sound Synthesis  
Group or Personal Instruction Technical Writing

☛ FREE/OPEN SOURCE SOFTWARE EXPERIENCE ☛

**Wget Project Maintainer      The GNU Project** *jun 2007-present*

*(Concurrent with employment at Barracuda Networks, Nano ISI, and VMware)* Responsible for maintenance, development, support, and ongoing development of the popular GNU Wget command-line application. Migrated source repository from Subversion to the Mercurial distributed version-control system. Implemented bug-tracking on the GNU Savannah web application, and migrated hundreds of bugs from to-do files and mail archives. Introduction and administration of a Wiki for documentation and discussion of Wget (<http://wget.addictivecode.org>). Oversaw the release of versions 1.11 through 1.12 of GNU Wget. During this time, I have overseen the addition of features such as improved HTTP authentication, CSS-parsing support, support for internationalized domain names and URIs, heavily expanded test suite coverage, and many other improvements and bug fixes.  
GNU/Linux C Perl

**Org. Admin. for GNU      Google Summer of Code** *summers 2008 & 2009*

*(Concurrent with employment at Nano ISI and VMware)* Evaluation of student project proposals, negotiation with other organizations and with Google over students with multiple accepted project proposals, acted as a point-of-contact for the GNU Project on IRC, and dealt with general administrative and, in some cases, disciplinary issues within the organization.

**Mentor for GNU Wget      Google Summer of Code** *summer 2008*

*(Concurrent with employment at Nano ISI)* Mentored and provided continuous guidance for two students. One project was to implement support for internationalized domain names and resource identifiers, the other was to make improvements to the efficiency and correctness of HTTP authentication support. Both students passed.

**Bug Triage & Fixing      Ubuntu Community** *jun 2006-jun 2007*

*(Concurrent with employment at Barracuda Networks)* Triaging, researching, and fixing bugs in the Ubuntu OS, collaborating with upstream Free Software developers. Learned to create and maintain Debian package files, test them using *ptest*, and generate *debdiffs* against previous Debian packages. Bugs fixed include improvements to terminal mouse handling in Vim, an improvement to the Linux kernel to avoid core dumps for processes which exceed filesystem limitations, a memory access violation in GNU Awk, and others.  
GNU/Linux C Debian Packaging

☛ EDUCATION ☛

<b>California State University of Sacramento</b>	Bachelor of Music program	1993-1998
<b>Sacramento City College</b>		1991-1993

☞ PROFESSIONAL EXPERIENCE ☞

**Member Technical Staff**      **VMware, Inc.**      *nov 2008–oct 2009*

Set up deployment-test environments for VMware's Client Virtualization Platform (CVP), using Altiris Deployment Solution, Microsoft System Management Server, and *pxelinux*. Maintained and performed ongoing development on OSs (OS-Specific Packages) of VMware's software tools for guest operating systems running on virtual machines. Supported guest platforms included Red Hat Enterprise Linux (releases 3–5), SuSE Linux Enterprise Server (releases 9–11), and Ubuntu (8.04, 8.10, and 9.04), and a variety of supported updates to those OS releases. This required a solid understanding of the RPM and Debian packaging formats, and of relevant differences in filesystem layout and initialization script conventions across the different guest platforms.

**Senior Software Engineer**      **Nano ISI**      *sep 2007–nov 2008*

Development, bug-fixing, and general ownership of Nano's *v2soc* and *soc2v* products, which translate Verilog value change dumps (VCDs) from simulated test runs on Verilog digital circuit designs, into the ASCII interface files (AVC, DVC) needed to drive actual test runs on the real circuits on an HP 93000 tester, and handle translation from ASCII interface files to a Verilog-language description of a test bench emulating the HP 93000's behavior, for design-debugging purposes. Implemented issue-tracking for Nano software using the Roundup issue-tracking software, and migrated existing bugs from the previous wiki-based system. Documented source repository usage practices and software release procedures on the internal wiki.

*GNU/Linux Python C++ GNU Emacs Vim Apache Web Server Bison/Yacc  
Lex/Flex Verilog HP93000 ASCII Interface*

**Software Engineer**      **Barracuda Networks**      *aug 2005–sep 2007*

Collaborative development and maintenance of the Barracuda Spam Firewall. Development of a realtime "intent results" cache daemon, which accepts connections on a Unix-domain socket and accepts hostnames to forward lookups to the Barracuda RBL using asynchronous I/O, and a set of Perl client libraries for interfacing with the intent cache daemon. Ownership of *amavisd*-based mail-scanning software component, used for scanning mails and analyzing them for spam and/or virus content. Implementation of various web GUI components, and associated automated tests and documentation, for specifying custom settings in the Spam Firewall firmware.

*GNU/Linux Perl C GNU Emacs Vim Postfix HTML CSS Subversion JavaScript  
W3C DOM Technical Writing Server/Client Architecture SMTP HTTP*

**Automation Lab Sys. Adm.**      **Orion Multisystems**      *feb 2005–aug 2005*

Collaboration and ownership of the design and implementation of a suite of hardware tests to be run at the product manufacturing site, along with the test framework upon which it was built. Implementation, maintenance and ownership of our group's website. Left due to layoffs, company closed business a few months later.

*GNU/Linux Perl C GNU Emacs Vim Apache Web Server HTML CSS JavaScript  
W3C DOM Server/Client Architecture*

← PROFESSIONAL EXPERIENCE (CONT'D) →

**Software Engineer**                      **Software Labs**                      *jul 2004–nov 2004*

Development work on *eXamin Fusion*, a data transformation and integration tool. Wrote a syntax-highlighting text editor, and reimplemented the internal data aggregation engine, improving efficiency by orders of magnitude. Led team efforts in testing and fixing bugs in the product, as well as in completing development of a custom ASP .NET solution for a customer. (*Resigned due to dissatisfaction with the work environment.*)

*Windows 2003 & XP Visual Studio .NET C# ASP .NET .NET Framework HTML CSS JavaScript W3C DOM*

**Sr Web Solutions Engineer**    **Wevtec (now Visteva)**                      *dec 2002–jul 2003*

Design, implementation and maintenance of several e-commerce and political web sites, including the official *DavisRecall.com* site. Implemented an HTTPS client as a COM object in C++, and an XML parser in ColdFusion MX. Handled the administration of web and mail accounts in IIS, and our office's wireless connectivity. (*Left due to inadequate compensation and a difficult commute.*)

*Windows XP HTML CSS ColdFusion MX DreamWeaver MX IIS Visual Studio .NET C++ COM MS Access*

**Systems Administration Consultant**    **Eisenlohr, Inc**                      *sep 2002–dec 2002*

Advised staff regarding issues of internet service administration, network security, mail client programming, and cryptography. Implemented web and mail services for the company on FreeBSD, including cryptographic authentication for users sending outgoing email. (*Short-term, pro bono engagement.*)

*FreeBSD Sendmail Cyrus Qpopper Cyrus SASL Library Apache Web Server SMTP POP3/APOP*

**Software Engineer**                      **Transmeta Corporation**                      *feb 2001–jul 2002*

Development of software tools in C++ and Perl, for in-house or customer use, following the departmental engineering cycle specification, architecture, requirements, design, implementation. Helped design and develop a set of command-line tools and libraries in C++, *RaceTrack*, for manipulating incidents within a workflow-tracking program, *TeamTrack*. Wrote a comprehensive set of object-oriented Perl libraries for manipulating a proprietary, typed csv data format, including recursively-defined list and tuple types; these libraries were used to sort, partition and generate reports based on files in this format.

*C++ Perl GNU Emacs HTML CSS*

**Software Engineer**                      **Workspot, Inc**                      *feb 2000–feb 2001*

Helped develop the company web site using *mod\_perl* over Apache *httpd*, including account login and management facilities.

*GNU/Linux Perl Apache Web Server HTML CSS GNU Emacs*

**Systems Administrator**                      **Adams Group, Inc**                      *1999–2000*

Handled installation, administration and oversight of the company's computers, network, and data, web and email servers. Created a database in Perl to track installed software versions on all computers, to help ensure that everything is kept up-to-date. Oversaw the conversion of our email servers from MS Exchange to Sendmail running on RedHat Linux, and implemented web-usage tracking for the company network, using the Squid web proxy.

*MS Enterprise Server Windows 95, NT GNU/Linux Perl Apache Web Server HTML CSS GNU Emacs Squid IIS*