

Mark J. Taylor

Computer Engineer / Software Developer

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Background

I have over thirty years of professional software development experience, in many computer languages and systems. My experience includes working with databases, Unix programming (kernel and user-level), computer networking, embedded systems, vision, robotics, and web programming. I have been the technical lead on many of the projects that I've worked on, and have team leadership experience. I have much experience in integration and enhancing large existing code bases. I am a co-inventor on six force-feedback robotics patents.

Skills

Education:	BS in Electrical/Computer Engineering from Wayne State University, 1990
Computer Programming:	35+ years (30+ years with C, 10+ years with Python, 5+ years with Go)
Unix systems programming:	30+ years
Web (HTML/CGI/SSI/JavaScript):	25+ years
Computer Languages:	C, Go, Python, PHP, Perl, AWK, shell-script, TCL, PL/SQL, Pascal, BASIC, FORTRAN, Forth, Intel x86 asm, Java
Operating Systems:	Unix (Linux, OpenBSD, FreeBSD, SunOS, Solaris, VxWorks, AIX, SGI/Irix, A/UX), DOS, DOS/32, Windows, MacOS
Networking Systems:	IP; Ethernet; IPsec; BGP; MS-PPTP; routing, bridging, firewalling; proxy serving; NAT
Softwares:	PostgreSQL, Apache, OpenSSL, sendmail, BIND, OpenLDAP, SAMBA, Git, SVN, CVS, gcc, MS Visual Studio

Experience

Cisco Systems

Software Engineer / August 2014 - present (9+ years)

- Develop, deploy, and monitor (Linux-based) malware analysis software and services for static and sandbox forensics, analyzing network activity, file i/o, registry changes, etc.

Arbor Networks / Ann Arbor, MI

Senior Software Developer / Feb. 2006 - May 2014 (8 years)

- Seven years developing software for on IP-based traffic monitoring, reporting, notification, and mitigation.
- More recent work was as dev/ops for cloud-based (Amazon/OpenStack) data feeds.
- Developed a database and API to millions of attacks processed through Arbor products.
- Wrote software in C, Python, PHP, TCL, and KSH for Linux and OpenBSD.
- Provided development support for customer engineers / customer support staff.
- Filed bugs, tracked bugs, worked with VersionOne, and supported QA teams to solve issues.

University of Michigan Health Systems, Medical Center Information Technology / Ann Arbor, MI

Senior Software Developer / Feb. 2002 - Jan. 2006 (4 years)

- Wrote CGI scripts for enterprise medical record viewing.
- Wrote PL/SQL stored procedures, Perl, shell, and AWK applications.
- Provided on-call support for all related systems.
- Implemented data quality monitoring, and provided reporting.
- Secured Solaris server system from unauthorized access.
- Responsible for a Unix-based Oracle server system.

Adapted Wave Technologies / Ann Arbor, MI

Software Engineer / Feb. 2001 - Oct. 2001 (8 months)

- Responsible for performance optimization of wavelet-packet based audio codec. Mathematical transforms included FFT, DFT, DCT, and Hartley.
- Developed a public API for this codec.
- Developed a streaming media format for multi-mode distribution.
- General web programming, networking, etc.

Cybernet Systems Corporation / Ann Arbor, MI

Software Developer and Researcher / Dec. 1990 - Jan. 2001 (10 years)

- Principle software engineer for the NetMAX commercial product. This involved team leadership responsibilities, programming for a web-based GUI using CGI, and massive code integration.
- Developed and patented a virtual force-feedback control system, implemented in DOS, DOS/32, Irix, and VxWorks. U.S. patent numbers [5,389,865](#), [5,629,594](#), [6,104,158](#), [5,459,382](#), [5,831,408](#), and [6,801,008](#).
- Developed a man-portable Unix-based wireless force-feedback vehicle remote control system.
- Developed a PC/104 embedded DOS-based network web camera with image processing capabilities.
- Developed an embedded processor based serial port digital interface for SINCGARS analog military radios.
- Developed a Macintosh-based computer vision system that included a custom programming language tokenizer and executor.