

Curriculum Vitae

Jason P. Winters

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United States Citizen

Education

- United States Air Force Radar/Electronics, Honor Graduate, 1976
- Bachelor of Science, Computer Science, Carnegie Mellon University, Pittsburgh, PA, 2008
 - Minors: Robotics, Photography
- Currently enrolled in Master of Fine Arts in Documentary Photography, University of Wales, Newport, UK, due to complete in Summer 2011

Professional Expertise

Unix programmer: Applications, utilities, drivers, development environments
Unix Administrator: Solaris, SunOS, Linux, heterogeneous environments
High level languages: C, C++, Perl, Java
Embedded: PIC, Atmel, 80x86, 680x0
Porting: Wide background in various Unix platforms/coding styles
OOA&D: Rumbaugh and UML methodologies
Process: Iterative development process
CASE tools: McCabe, Rational Rose, OMTTool, Poseidon
Multimedia design: Adobe (Photoshop, Lightroom, Illustrator), Avid, Sound Forge
Internet: DNS, Sendmail, PPP, PHP, Web servers/pages, Routers, Security, Spam filters
Photography: Fine Art, Portraits, Documentary Projects

Areas of Special Interest

- Robotics
- Security
- Portable system design
- Cross platform development
- End user training
- UML/OO Design advocate

Academic / Teaching Experience

Teaching Assistant – Photography Department

Carnegie Mellon University, Pittsburgh, PA 2007-2008

- Teaching Assistant for Portrait Photography class
- Help maintain hardware in photography labs
- Help students operate equipment and answer questions as needed

Lab Assistant – Undergraduate Modular Snake Robot Group, Robotics Institute

Carnegie Mellon University, Pittsburgh, PA 2005-2007

- Helped diagnose problems with designs for snake robots
- Helped redesign mechanical components for robustness and versatility
- Analyzed and redesigned major electronics and software components
- Tutored and mentored undergraduates in design and development as part of a team

Computer Lab Manager

Southern Oregon University, Ashland, OR 2003-2005

- Manage four computer labs for the Computer Science and Art Departments
 - Systems are a mix of Mac OS X, Linux, Solaris, Windows, and NT/2000/XP.
- Manage student lab assistants, schedules, and budgets
- Art Department:
 - Managed fine art digital lab
 - Trained students/TAs on Large Format printer use
 - Purchased, installed and gave initial training on Maya
 - Supported software for unusual student needs

Ham Radio Instructor

Ashland, OR, October-December 2004

- Amateur Radio Technician License Class
 - Beginning electronics, radio, antenna and propagation theory
 - FCC Regulations and best practices, basic emergency communications procedures
 - Elements of radio, antenna design

Tutor

DeAnza College, Cupertino, CA October 2002 - 2003

- Computer Lab tutor in C, C++, Perl, Assembler, Unix, Java
- Programming Club tutor in UML and iterative development process

Tutor

Octel Communications, Milpitas, CA 1998

- Use Case Development
- Unified Modeling Language
- Programming techniques and style
- Mentor for interns in tools programming techniques

Sailing Instructor

Spinnaker Sailing, Redwood City, CA 1993-1997

- Classroom and practical instruction in Beginning Sailing, Intermediate Sailing (Basic Coastal Cruising), Coastal Navigation
- Practical instruction in Bare Boat and Sailing Techniques
- American Sailing Association certified

Instructor

Altos Computers, San Jose, CA 1984 - 1987

- Assembly

Instructor

Southern California Programming Club, Santa Ana, CA 1983-84

- Classes in Assembly and C

Instructor

Fort Walton Beach Programming Club, FL 1979-81

- Classes in Assembly

Archery Instructor

Kings Canyon National Forest, CA 1974

- Practical instruction in Archery techniques

Courses Developed

- Assembly
- C
- Use Case Development
- Amateur Radio Technician License

Industrial Experience

Carnegie Mellon University, Pittsburgh, PA 2008-2009

Research Engineer, Remote Sensor Project, Robotics Institute:

Principle responsibility for sensor mesh network project. Fleshed out requirements, did architecture, design, specification of components, documentation, physical design, implementation and testing of hardware and software against requirements. Project was a long-life battery powered sensor platform. Deployed as individual ‘nodes’ configured into a mesh network for reporting status to a base station. Network was self configuring and self healing. Data collected was then formatted as required and supplied for remote analysis. Each node supported both analog and digital sensors, with expansion via I2C interface and local logging to a micro-SD chip. Initial deployment covered 5 working installations, and one test location.

Carnegie Mellon University, Pittsburgh, PA 2005-2007

Lab Assistant, Undergraduate Snake Robot Lab, Robotics Institute:

The “make it work guy” on the team, I had oversight of the work of the ECE, ME, and CS team members, solving cross disciplinary problems in the modular snake robot group. During my time in the lab, we changed from a plastic

to an aluminum body, and redesigned the mechanical and electrical systems to be more robust. We also switched from simple hobby servos to fully integrated sensors and CPUs for each link.

Wyyzck, Inc. (formerly Textural Software and Wyyzck Training and Consulting) 1988 - present

CFO, consultant:

Design, create, and maintain various web sites. Special projects include: designing, coding, and maintaining a virtual online catalog; securing the servers from hackers using a wide variety of techniques. Designed and coded a mail filter to remove spam. Installed and continue to maintain txt.com, a class-C network. Currently a mini-ISP providing low volume Internet services via DSL. Run Web service, DNS, email server, host multiple domains, dialup PPP, anonymous FTP, maintain UNIX (Sun, Linux) servers and clients, and configured NT and Win95 clients into the existing TCP/IP network. Previously the provider of BBCS, a fully configurable Unix BBS; Exec, a flexible regression test/exercise engine, and a USENET feed.

Cadence Design Systems 1999-2002

Member of Consulting Staff:

- Ported software base to Linux
- Added Flexlm licensing manager to code base
- Rewrote line interface parser to include command completion, argument completion, and syntax checker
- Wrote client/server interface to on-line documentation system
- Supported configuration management and testing groups
- Engineering support for debugging on Linux
- Support full lifecycle of licensing product from requirements to roll-out
- Implemented Linux stack trace
- Maintained licensing servers
 - Debug licensing issues
 - Upgrade license servers
 - Upgrade license software
 - Generate in-house licenses
- Worked to improve code infrastructure
 - While adding updates, refactored code to make it clean, easy to use, and easy to maintain
- Ported code to and debugged code on HP/UX

W2 Productions 1998-2004

Owner, videographer: Direct, film and edit multi-camera digital video; record and edit digital sound; take and edit digital still photographs.

Lucent Technologies (formerly Octel Communications Corp.) 1990-1999

Staff Design Engineer: Configured and maintained the engineering development environment, building it up from in-house and 3rd party tools, and creating integration software between tools to ensure all needed functionality exists. Created various tools to help the engineering teams work more efficiently, such as tools to:

- enhance a low level debugging interface for embedded systems development
- automate the configuration of systems connected to Unix computers
- automate the creation of any release of Octel software that existed in the field
- automate the creation of an upgrade path from any Octel software release to another
- perform digital regression testing for voice processing systems

Company resource for OO methodology (UML). Evangelist for promoting Object Oriented development and programming practices. Act as Unix resource for system administration group, solving computer, software, and configuration problems. Configure and maintain all hardware and software for systems in training room. Manage and train interns. Provide user training.

API Developer with Advanced Technology Group: Wrote API interface for next generation Octel voice processors on UNIX. Designed and maintained the Advanced Technology Group network which interfaced with Octel's main net.

Senior System Administrator: For 2 years maintained a network of over 150 Sun workstations, over 200 PC's, 15 servers, plus interfaces to prom programmers, printers, modem banks, and dedicated local hardware. Performed

training for junior admins, handled user interactions. Designed and maintained the network. Evaluated and purchased all 3rd party products.

Arix Corporation 1987- 1990

Sr. Firmware & Diagnostic Engineer: Developed entirely new build/download environment, cutting drastically the loop time for development. Designed and implemented client-server utility to download Unix programs to stand-alone boards. This was adopted as the standard for all further development company wide. Also: wrote a multitasking monitor in ROM on a multi-processor Unix system; developed diagnostics for primary boards used in the main products; developed an interrupt dispatcher for next generation Unix system; developed power-up, boot sequence, and overall system configuration and initialization programs; and supervised development of system level diagnostics.

Tools engineer: Ported and maintained X11R2/3 to System V environment converting sockets to TLI. Developed X11 demos and configurations used by company. Performed System Administration for engineering machines. Installed and maintained USENET and email connectivity.

Altos Computers 1984 - 1987

Firmware and Diagnostics Engineer: Developed CPU monitors, serial board monitors, disk/tape I/O monitors for Altos Unix/Xenix computers. Developed Automated Remote Diagnostic capabilities and expanded to previous product lines. Maintained Altos Net (proprietary network protocol) and hardware systems. Mentored junior engineers.

Matrix Impact Tech 1984

Contract Hardware Engineer: Cleanup hardware engineer. Finished design of 18 pin dot matrix printer. Designed and built diagnostic tools to validate printhead design (hardware and real-time software in assembly). Company completed design on time and acquired capitol backing.

Disc Instruments Technology 1981-1984

R&D Engineer: Optical encoders and interfaces

Military

Air Force 1976-81, Honorable discharge

Publications

- Schneider, Geri, and Winters, Jason P.: "An Introduction to Use Cases", Software Engineering Volume 1, IEEE Computer Society, 2002: 299-308, ISBN 0-7695-1555-X
- Schneider, Geri and Winters, Jason P. "Applying Use Cases (Second Edition)", Polish Edition, Wydawnictwa Naukowo-techniczne, 2004, ISBN 83-204-2943-9
- Schneider, Geri and Winters, Jason P. "Applying Use Cases (Second Edition)", Chinese Edition, China Machine Press & CITIC Publishing House by arrangement with Addison Wesley, 2002, ISBN 7-111-10853-1/TP
- Schneider, Geri and Winters, Jason P. "Applying Use Cases Second Edition: A Practical Guide", Addison Wesley, 2001, ISBN 0-201-70853-1
- Schneider, Geri and Winters, Jason P. "Applying Use Cases", Japanese Edition, Addison Wesley, 1998, ISBN 4-89471-186-9
- Schneider, Geri and Winters, Jason P. "Applying Use Cases: A Practical Guide", Addison Wesley, 1998, ISBN 0-201-30981-5

Invited Seminar Presentations

- Modeling Web Applications in the Unified Modeling Language, UML<<2000>>, York England, Sept, 2000

Academic Honors and Awards

- Honor Graduate, Air Force Radar/Electronics school, 1976
- Phi Kappa Phi, 2005
- Outstanding Calculus Scholar, Southern Oregon University, 2005

Professional Affiliations

- Member, Institute of Electrical and Electronics Engineers, Inc. (IEEE)
- Member, Association for Computing Machinery (ACM)
- Member, Amateur Radio Relay League (ARRL)
- Member, Amateur Radio Emergency Service (ARES)