

Résumé - David Hostetler

°Summary°

- Software engineer; MS/BS Computer Engineering; 10+ years of professional, team-oriented software development.
- Career experience and aptitude for communication complement my educational background, making me well suited for a flexible engineering role in software development.
- I can help your team achieve its goals. I adapt quickly, attend to detail, and foster an atmosphere of creativity, communication, and technical excellence.
- I seek the opportunity to work with people with whom I can share respect, motivation, friendship, and the passion for honest success.

°Education°

Graduate

New Mexico State University, Las Cruces, NM
Major: Electrical and Computer Engineering
Focus: Computer Graphics
GPA: **4.0/4.0** (cumulative, 30 credits)

Undergraduate

New Mexico State University, Las Cruces, NM
Major: Electrical and Computer Engineering
Minor: Mathematics
GPA: **4.0/4.0** (cumulative, 153 credits, summa cum laude)

°Computer Skills°

Languages

Python, C++/C, HTML, CSS, Unix shells (bash), JavaScript

Operating Systems

Linux (Gentoo/Debian/Ubuntu), Windows, OS X

Application Programming Interfaces

Posix, wxWidgets, Plone, Zope, OpenGL, Microsoft Win32

Tool Proficiencies

Subversion, Bazaar, Vim, Apache HTTP Server, Doxygen, gettext i18n, Perforce, Gimp

°Career Experience°

Nemetschek Vectorworks
Columbia, MD

June, 2008 - present
Supervisor: Paul Pharr

- **Developed a cross-platform application installation system**
 - Designed and implemented a python-based installer framework for orchestrating unique and complex installation procedures for desktop applications
 - Threaded architecture enabled responsive user interaction in the midst of extended atomic installation actions
 - Object-oriented MVC-based design supported graphical, command-line, and unattended control of installation
 - Robust configuration support and comprehensive default behavior allowed for opt-in customization complexity
- **Developed and administered a web portal serving a diverse range of users**
 - Managed a custom, enterprise-grade deployment of the Plone CMS
 - Designed and implemented the layout, rendering logic, and systems-integration
 - Implemented interfaces (XMLRPC) for managing data stored in an SQL database

**Independent Software Development
Ellicott City, MD**

**June, 2006 - May, 2008
Supervisor: self**

- **Developed content and tools for a PC racing simulation and co-founded an online league**
 - Designed and implemented a GUI application for automatically updating, building, and configuring client-side game content
 - Engineered a system to enable notification of available updates; automatic, in-place, updating; and graceful accommodation of new (potentially incompatible) changes to the configuration interface
 - Developed a custom, community-oriented website (gridmotorsports.com) and administered league operations
 - Performed additional duties in the areas of technical support, customer service, systems administration, and community management
- **Developed custom products for the Plone content management framework and Zope web application server**
 - Designed and implemented components for storage, presentation, and organization of media and abstract content objects
 - Designed and implemented the website's visual design and user interaction
- **Administered a platform heterogeneous network**
 - Acquired administrative expertise with the following tools and services: OpenLDAP, OpenSSL, OpenSSH, Apache HTTP Server, MySQL, QMail, Samba, Zope, Plone
 - Responsible for all mechanisms and policies regarding security protection/recovery and data backup/recovery
 - Created a web presence for multiple domains, including services for DNS, HTTP, HTTPS, IMAP, POP3, SMTP, SSH, and XMPP
 - Configured and maintained an environment for authenticated, distributed software development, including source control (Subversion) with automated build reporting, issue tracking (Mantis), and communication (ezmlm, OpenFire)

**Senior Member of the Technical Staff
Mission Engineering and Analysis
Information Operations
Sandia National Laboratories
Albuquerque, NM**

**May, 2003 - May, 2006
Supervisors: Bruce Malm, Roxana Jansma**

- **Participated in design, implementation, and maintenance of satellite ground systems software**
- **Responsible for large-scale image data processing subsystem**
 - Developed, verified and deployed software to a system providing 24/7 support of a satellite-hosted imaging payload
 - Converted system from C to C++, applying disciplined use of OOP techniques, documenting and grooming over 25,000 lines of code
 - Designed and implemented a highly-customizable logging system
- **Designed and implemented a complete software system for managing EEPROM data on a microcontroller**
 - Designed and implemented a robust, flexible, extensible serial communications protocol
 - Designed and implemented a GUI client (VB6.0) and an embedded host (Hitachi assembly)
- **Participated in the development of an advanced network traffic analysis tool**
 - Contributed to design and implementation of core components of the architecture
 - Configured and maintained web-based collaboration tools
- **Developed a prototype radar visualization client using OpenGL, VB and FalconView SDK**

- **All work was conducted under a DOE security clearance (further details are unavailable)**

Software Engineer
Graphics & 3D Technologies
Intel Corporation, Hillsboro, OR

June, 1999 - January, 2003
Supervisor: Gary Baldes

- **Designed and implemented components for 3D Meshes, hierarchical node graphs, and resource management**
- **Contributed to three commercial software products:** *Macromedia Director 8.5, OradNet TOPlay, Digimation Real-Time 3D Libraries with Intel Scalable 3D Graphics*
- **Contributed to design and implementation of a cross-platform, modular, runtime-extensible, 3D graphics and simulation engine**
 - Helped establish an automated unit test mechanism, ensuring frequent and comprehensive testing
 - Created and maintained much of the high-level project documentation
- **Contributed to design and implementation of Shockwave3D, a cross-platform 3D graphics engine integrated into Macromedia Shockwave 8.5**
 - Worked closely with the lead architect to refine and implement runtime resource sharing capabilities
 - Designed and implemented significant enhancements to the engine's particle system
 - Implemented significant portions of the serialization and I/O subsystem
- **Worked with OradNet to improve TOPlay, a 3D sports web-casting product**
 - Designed and implemented additional features, including several real-time shadow algorithms, particle-based weather effects, and a new camera control system
 - Experimented with unique ways of improving graphical features without compromising performance
 - Collaborated with an independent 3D artist to create content tailored to specific scalability technologies
- **Investigated and prototyped several non-photorealistic rendering (NPR) techniques**
 - Profiled silhouette edge detection algorithms with respect to accuracy vs. speed (http://negativesum.net/Members/hoss/resume/SED_Algorithms.pdf)
 - Explored methods for generating curvature-driven textured lines (http://negativesum.net/Members/hoss/resume/CDT_Lines.pdf)
- **Designed, implemented, and maintained the group's internal website, including integration with development tools**

°Personal°

I enjoy gaming (board & video), ice hockey, golf, hiking, classical guitar, history, and inclement weather.