

# Lance Held

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**Objective** To utilize my analytical and design skills in the field of software engineering to provide elegant and novel solutions to complex and challenging tasks.

**Experience** 1998–present Nanogen, Inc. San Diego, CA

**Lead Software Engineer (2002-present)**

**Senior Software Engineer (2001-2002)**

**Software Engineer II (1999-2001)**

**Software Engineer I (1998-1999)**

- Design, develop, and maintain browser-based graphical user interface for proprietary molecular biology research device. (C, PERL, JavaScript, Apache, QNX)
- Design, develop, and maintain browser-based data visualization and analysis tools for various DNA assays (STR, SNP, Gene Expression). (PERL, JavaScript, Apache, QNX)
- Technical/Architectural lead for software/system requirements for next generation molecular diagnostics FDA Class I 510(k) Instrument. (C#, XSD, XML, XSLT, CSS, ASP.Net, .Net Remoting/Web Services, Flash, IIS, SQL Server, WinXP)
- Project lead for modular automated protocol generation and data analysis software (510(k)) for use in CLIA certified laboratories. (PERL, JavaScript, Apache, QNX, VB6, SQL, WinXP)
- Perform all software builds, releases and associated documentation (Perforce)
- Provided guidance and troubleshooting during development of point-of-care companion software (CLIA waived). (C#, Delphi 5)

2000-present San Diego, CA

**Freelance Web Designer**

- (2007-present) Consulting for Bay Area social networking start-up PrivateTree.com (System Administration, Ruby on Rails)
- (2005) Implemented design for nano.com with news/job system originally based on MovableType and custom image gallery (HTML, CSS, JavaScript, MovableType)
- (2005) Designed and implemented base layout/graphics and rollover button code for ljhsalumni.org (HTML, JavaScript, CSS, Photoshop)
- (2004) Designed and implemented site (except for cart system) for hipshot.tv (Flash MX, HTML, Photoshop)

1996–1998 Gensia Automedics, Inc. San Diego, CA

**Control Systems Engineer**

- Improve closed-loop algorithm for optimal heparin infusion for the AutoHep System, a FDA Class III Instrument (C/C++, Matlab, RTXC)
- Design closed-loop algorithm for automatic blood sampling for the AutoHep System (C/C++, Matlab, RTXC)
- Digital filter design (Matlab)
- Develop/maintain company intranet and HTML based software development tools (PERL, Apache, CVS, UNIX)
- Assist with pre-clinical trial experiments and miscellaneous lab work

Jun1996–Sep1996 High Technology Solutions, Inc. San Diego, CA

**Programmer**

- Co-developed the getfood Online Visual Menu web site ([www.getfood.com](http://www.getfood.com), has since been dissolved) (PERL, IIS)
- Developed visual menu kiosk using MacroMedia Director

**Experience** Jun1995–Sep1995 Realtime Marketing San Diego, CA

**Web Site Developer**

- Developed the Axeta Travel2000 web site ([www.travel2000.com](http://www.travel2000.com), has since changed ownership) (HTML, Photoshop, Apache)

Aug1994–May1995 University of California, Berkeley Berkeley, CA

**Student Researcher**

- Developed control system for rapid thermal processing of semiconductors (Matlab)

Jun1994–Aug1994 Naval Research and Development San Diego, CA

**Research Assistant II (Code 981)**

- Research information concerning fire safety regulations for marine vessels as outlined by the California Coast Guard
- Design a welding assembly fixture whose purpose was to maintain uniform curvature of a steel tube, 6 feet in diameter with 1/2 inch wall thickness (AutoCAD)
- Modify computer model and perform stress analysis (LapCAD II, MSC/NASTRAN, and MSC/pal 2)

**Skills**

*Target Platforms:*

Windows 95/98/NT/2000/XP/Vista, Linux, UNIX, Solaris, RTXC, QNX

*Languages/Technologies/Frameworks:*

C#, C/C++, PERL, Flash, Python, Java, ECMAScript (JavaScript), ASP/ASP.Net, XML, XSD, XSLT, XPath, FO, HTML, XHTML, CSS, Rebol, VB/VB.Net, Ruby, Ruby on Rails, PHP, CakePHP

*Applications:*

VS/VS.Net, TestDriven.Net, NCover, NUnit, WilsonOR Mapper, SQL Server, IIS, Apache, Matlab/Simulink, Single Step, MKS Source Integrity, Perforce, Subversion, DevTrack, Photon Application Builder (PhAB), Photoshop, Flash MX, XML Spy, Apache FOP

**Education**

1995–1996 University of California, San Diego

- M.S., Bioengineering
- Elective series: Digital Signal Processing, Image Processing

1991–1995 University of California, Berkeley

- B.S., Mechanical Engineering
- Emphasis on Control Systems
- Attended on full academic scholarship (Drake Scholar)
- Chancellor's Scholar
- ASME member, Pi Tau Sigma (ME honor society)

1988–1991 La Jolla High School

- Graduated with honors
- Cum Laude Society
- National Science Olympiad medalist (1989, 1990)

**Interests**

In my spare time I enjoy developing web sites and applications: web based MP3 jukebox application for home (IIS, PERL, XML, XSLT, CSS, Winamp), web based bracket and scoring site for sports tournaments (Apache, PERL, XML, JavaScript, Flash), LJHS Alumni website (<http://www.sniff.org/ljhs.html>), etc.

**Publications** *GRASP-DNA: a web application to screen prokaryotic genomes for specific DNA-binding sites and repeat motifs.* Schilling CH, Held L, Torre M, Saier MH Jr., Journal of Molecular

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**References** Provided upon request.