

## CLINICAL SCIENTIST / SOFTWARE DESIGN ENGINEER

### Professional Summary

I am an experienced senior software engineer with a proven track record in high quality PC-based, embedded, and web-based software design and extensive domain knowledge of echocardiography. I am seeking to find a challenging and rewarding position in the field of medical software development, preferably (but not necessarily) with a strong mathematical component. Highly skilled software development professional bringing more than [Number] years in software design, development and integration. Advanced knowledge of [Programming Language] and [Programming Language]

### Skills

- Code reviews
- Agile
- Linux
- Advanced critical thinking

### Work History

Clinical Scientist / Software Design Engineer Jan 2007 - Current  
Abbott Laboratories Stamford , CT

- Interacted directly with luminary Echocardiologists to develop innovative solutions for their clinical needs: Sole technical contributor for "RuleGen" application.
- This innovative feature, developed in collaboration with the University of Chicago, allows for the automated detection of conflicting or missing report findings, thereby improving the quality of Echo reports and potentially patient outcomes.
- It also offers a sophisticated retrospective data-mining capability for research and registry reporting purposes.
- Personally shepherded this feature, which has so far resulted in two publications, from conceptual prototype to production release as part of our latest product offering.
- In conjunction with Children's National Medical Center, used STATISTICA to analyze a population of over 400 normal pediatric echo studies.
- Developed coronary Z-Score regression formulae for use in Pediatric Echo and published results (paper has been cited 18 times).
- Implemented these formulae in our Xcelera product.
- Implemented proprietary pediatric Z-Score formulae developed at Boston Children's Hospital as a licensed feature in our Xcelera product.
- Served as technical liaison, interacting directly with the physician who developed the Boston Z-Score package to resolve both clinical and mathematical questions.
- Developed an algorithm for automated generation of English diagnostic finding statements directly from cardiac wall scoring diagrams in collaboration with Stanford University Medical Center and other sites.
- Provided extensive Javascript customization of Echo reports for Duke University Hospital to meet their exacting standards for structured reports.
- Helped provide engineering support for large installed customer base.
- Was called upon to interface directly with end customers world-wide regarding issues in several areas of expertise (Echo measurements, Z-Score calculations, report customization, image quality, etc.).

E-commerce Design Consultant / Webmaster Jan 1999 - Jan 2001  
Abbott Laboratories West Chester , OH

- Involved ground-up design of commercial website software, including automated generation of HTML pages (using VC++) for virtual storefront, programmatic FTP interface with remote server, and complete suite of backroom functionality written in CGI / Perl.
- Also was responsible for administration of remotely hosted website once it became operational.

Software Design Engineer Jan 1997 - Jan 2007  
Synopsys, Inc. Colorado , TX

- Digital Echo Lab Product.
- Contributed to EnConcert/Xcelera product, which is a client/server Windows-based CardioPACS system designed to acquire, store, and provide reporting and measurement capability for diagnostic cardiac images from ultrasound systems or other DICOM devices attached to the network.
- Most work concentrated in report subsystem and involved significant GUI development using Visual C++ / MFC as well as programmatic interface with product's SQL database via ODBC, however this position also included heavy involvement in image display and measurement algorithms at various points.
- Other aspects of this job included preparation and presentation of training material to field personnel, direct support of customers on site or remotely, clinical evaluation of new revision prototypes, and providing support for trade show or demo systems.

Software Design Engineer Jan 1987 - Jan 1997  
Hewlett Packard Cardiac Ultrasound Imaging Systems City , STATE

- Extensive history of contribution to various cardiac ultrasound imaging system products as designer and technical project lead of embedded software development.
- Reputation for extremely high quality software for complex applications.
- Highlights include

Member Technical Staff Jan 1986 - Jan 1987  
AT&T Bell Laboratories City , STATE

- Senior software engineer responsible, in part, for architecture, implementation, deployment, and documentation of embedded telemetry system associated with state-of-the-art 1.7 Gbit/sec long-haul fiber optic communication system.
- Recipient of Exceptional Contribution Award for this effort.

#### Education

MS : Applied Mathematics Harvard University City , State

GPA: GPA: 3.71 / 4.00 Applied Mathematics GPA: 3.71 / 4.00

BS : Computer Science Mathematics, Physics, German Rensselaer Polytechnic Institute City , State

GPA: GPA: 3.92 / 4.00 Graduated Summa Cum Laude Computer Science GPA: 3.92 / 4.00 Mathematics, Physics, German Graduated Summa Cum Laude

#### Accomplishments

- Patents US Patent #5,872,571: Method and apparatus for display of multi-planar ultrasound images employing image projection techniques.
- US Patent #6,679,848: Method for allowing plug-in architecture for digital echocardiography lab image processing applications.
- US Patent #7,188,246: System for adding electronic signature to a report associated with an image file.
- three additional patents filed).

#### Skills

.Net, 3D, Photoshop, art 1.7, C, CGI, CGI / Perl, ClearCase, client/server, color, hardware, CSS, data-mining, database, documentation, drivers, engineer, English, FORTRAN, FTP, GUI, HP, HP-UX, HTML, image, imaging, Javascript, Languages, C#, MFC, Windows, network, ODBC, Operating Systems, Perl, personnel, project lead, publications, quality, reporting, researching, research, software development, SQL Server, SQL, STATISTICA, structured, supervision, telemetry, Unix, Unix shell scripts, Visual C++, VC++, Visual Studio, website, written