

## Christopher David Schultz

805 South Veitch Street, Arlington, VA 22204 • +1.301.806.4116 • email: chris@christopherschultz.net

### SUMMARY

Chief software architect, engineer and product lead with proven analytical, problem solving and communication skills combined with strong software architecture and implementation. Experienced in technical training, process development and team dynamics management.

Expert in Object-Oriented principles, patterns, analysis, design and implementation:

- Object-Oriented Analysis and Design
- Java (Java SE/EE)

Extensive experience with other technologies including:

- Java, Java Servlets, XML/XSLT, JSP, Apache Tomcat, Apache Struts, Apache Velocity, Apache Lucene/Solr, and others
- Relational database design and Structured Query Language (SQL) (MySQL 3.x-5.x/MariaDB, PostgreSQL, Oracle)
- C, Pascal, Perl, PHP, Python, UNIX shell-scripting
- UNIX, GNU/Linux System Administration
- Human-Computer Interaction, User Interface Design and Usability Analysis

Experience with additional technology:

- C++, Objective-C, C#
- Mirth Connect (HL7 interface engine), HL7
- JasperReports and associated technologies
- Memcached

### EMPLOYMENT

TOTAL CHILD HEALTH, INC.

BALTIMORE, MD

Chief Technology Officer (7/2004-present), Technical Director (7/2003 – 7/2004)

7/2003 – present

Designed and implemented flagship pediatric mental and developmental health diagnostic and decision-support system (CHADIS) serving hundreds of physicians worldwide. Successfully led the company and product through an external HIPAA security and privacy audit. Designed and built a proprietary integration platform to facilitate integration with customer EHR/EMR systems. Built a standards-based (HL7) integration platform for integrating with arbitrary EMR/EHR systems. Led technical negotiations with multiple EHR vendors to secure vendor-supported integrations with our product. Led technical communications with customers to support sales and account management. Engineering team lead, lead architect, engineer, and HIPAA Security Officer. Voting member of the company management group.

APACHE SOFTWARE FOUNDATION

BALTIMORE, MD

ASF Member

3/2016 – present

Committer

2/2008 – present

Committer on Apache Tomcat and Apache Velocity. Member of the Apache Tomcat Project Management Committee (PMC) and Apache Tomcat Security Team. Speaker at multiple ASF conferences and associated events. Helped organize an Apache BarCamp in Northern Virginia in May 2012. Re-architected credential handling in Apache Tomcat to significantly improve contained-managed password security options. Built Apache Tomcat's cluster encryption mechanism. Co-organizer for Apache TomcatCon 2018 (part of ApacheCon).

VIRTUALCOURTHOUSE.COM

ANNAPOLIS, MD

Software and Systems Consultant

6/2003–1/2004

Managed technical operations and implemented all software change requests and new features during funding phase.

THE ADRENALINE GROUP, INC.

WASHINGTON, DC

Software Architect Consultant

8/2000–6/2003

Shipped consumer-facing products for multiple clients. Overall responsibilities include frequent face-to-face and written communication with clients, system design and architecture, project scheduling and software development.

*John Show, Inc.*

*April - June 2003*

- Designed and implemented an internationalized batch XML processing application to aggregate data from multiple international family planning donors (USAID, UNFPA, etc.) for reporting and shipment scheduling purposes.
- Implemented several features for a contraceptive donation forecast and tracking system funded by the Bill and Melinda Gates Foundation, the William and Flora Hewlett Foundation, the David and Lucile Packard Foundation, and the Wallace Global Fund.

*Brainshield Technologies*

*January – April 2003*

- Designed a scalable DRM key distribution service with a multi-tiered, territory-aware, high-throughput architecture; constantly refactored design and sample implementations during requirements changes.
- Provided business and technical consulting services to determine the direction of the client's product.
- Implemented an MPEG audio processing library using C++ as a library for use in a client-side media player plug-in as well as a Java Native Interface wrapper for use with a server-side Java application.

*VirtualCourthouse.com*

*February 2003*

- Project lead for developing a complete Alternative Dispute Resolution (ADR) system for performing arbitration, mediation, and neutral case evaluations entirely online.
- Planned, implemented, and deployed a pilot application over one month as a proof-of-concept to obtain additional funding for the client, as well as an alpha release for usability testing.

*VeriSign Inc.*

*September 2001 - November 2002*

- Invited to return to help design and ship all-new versions of ImageCafé, now called *Websites By VeriSign*.
- Responsible for re-architecting and re-implementing the entire product data model for the Websites by VeriSign application, simultaneously integrating the existing ImageCafé database with VeriSign's Enterprise Database.
- Designed and implemented a new modular order-processing system to handle customer purchases during both normal operation as well as database downtime.
- Designed a SOAP-based Web Service to accept and process these orders from any client, including the newly overhauled web-based client running on BEA Weblogic J2EE server.
- Improved performance of object-to-relational mapping layer several-fold through the aggressive use of caching and improved use of Java class introspection.
- Initiated a refactoring of existing code base to be more standards-compliant, standardized unit testing, and selected and integrated third-party components to replace poor in-house implementations.

*Threewide Corporation*

*May – September 2001*

- Lead software architect for a new real-estate property management and multiple-listing service web application, ListAndSent.net.
- Responsible for system design and implementation, as well as integration with an application running on Palm Pilot handheld PalmOS via XML over HTTP. This handheld and web application combination allowed real estate agents to more quickly catalog properties and reduce listing errors.

*Virtual Plastic.com*

*April – May 2001*

- Lead software architect for a secure, anonymous, re-chargeable debit-card system with an online interface to compete with VISABucks and American Express.
- Responsible for system design, network architecture, software implementation and multi-tiered credit transaction processing design.

*Network Solutions, Inc.*

*September 2000 - March 2001*

- Developed and released versions 3.0 and 3.1 of Network Solutions' online website-building application, ImageCafé.
- Responsible for subsystem design and implementation, and inter-project management.

*Adrenaline (Internal)*

- Authored proposals to several clients including McKinsey & Company and Brainshield Technologies.
- Represented Adrenaline at several local events including a Sprint Technology Seminar.
- Active author and motivator for development and team management best practices.
- Active member of the Java and Java-related Open Source communities.
- Proposed, researched, and presented several technology-oriented seminars.
- Innovated and improved standard Adrenaline class libraries, used on many projects.
- Authored several "how-to" documents for new technologies such as Jakarta Tomcat and Apache Server 2.0.

SCRIPT COMPUTER CONSULTANTS, L.L.C.

GERMANTOWN, MD

Co-owner, Software Engineer Consultant

6/1996 – 8/2000

Planned, standardized and implemented specific information technologies, protocols and technical processes; coordinated and managed IT projects and personnel. Provided technical consulting services to a wide range of clientele.

- Designed and developed a business solution for Cook Ross, Inc. using C and Java that increased throughput and cost estimate accuracy by 75%.

**EDUCATION**

Bachelor of Science in Computer Science (+ Imaging Systems Certification)  
Rose-Hulman Institute of Technology, Terre Haute, IN

**PROFESSIONAL INVOLVEMENT**

Committer, Project Management Committee, and Security Team member for Apache Tomcat. Committer for Apache Velocity. Contributor for multiple Apache Software Foundation projects.  
Book reviews for Manning publishing: *Struts 2 in Action*, *Objective-C for the iPhone* (re-titled *Objective-C Fundamentals*)

**PUBLICATIONS:**

*Web Applications with Java/PHP*, Linux Journal, September 2010  
*Monitoring Apache Tomcat with JMX*, Speaking Presentation, ApacheCon North America, 2014/2015/2016  
*Connecting Tomcat to the World*, Speaking Presentation, ApacheCon North America, 2014  
*Load-balancing Tomcat with mod\_jk*, Speaking Presentation, ApacheCon North America, 2015  
*Let's Encrypt Apache Tomcat*, Speaking Presentation, ApacheCon North America 2017/2018  
*Locking Down Apache Tomcat: Practical Security for Real-world Applications*, Speaking Presentation, Apache Roadshow North America, 2018