

David W Millar

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Summary

Seasoned software engineer with insatiable technolust. Eager to “make the impossible possible, the possible easy, and the easy elegant.” Well versed in OOA/D, web application architecture and infrastructure, security, the jvm ecosystem, networks, SOA and Integration systems. Experience supporting the full systems development life-cycle and integration of production enterprise applications, public facing multi-tenant cloud applications, research oriented projects, and open source projects. Invested in agile practices, continuous process improvement, automation, and DevOps.

Experience

Senior Software Engineer

Sept 2012 – Present

IBM Smarter Workforce

Wayne, PA

- Designed, developed, and maintained greenfield core infrastructure services, including SSO and other centralized auth related responsibilities.
- Mentored juniors, seniors, and directors across departments including QA, software engineering, and database administration on topics such as automated functional web testing, behavior driven and test driven development, automated database change management solutions. Presented to cross functional teams on pragmatic DevOps, technical debt and refactoring.
- Pushed for and educated about polyglot persistence where performance or design warranted it.

Senior Software Engineer

March 2012 – July 2012

Software Engineer Contractor

Dec 2011 – March 2012

MDconnectME Inc

Philadelphia, PA

- Worked in a senior capacity on planning, design, requirements, developing and maintaining infrastructure, from the ground up, for the MDconnectME cloud application. Which has been featured in a New York Times blog, Fox Business, MSN News, and various local media outlets. (JEE/Spring/Hibernate/Jsp/jQuery based application).
- Many hats were worn: data architecture, security, UX, etc. Major focus on simplicity, scalability, cross-browser support, and HIPAA compliance.
- Designed, developed, and maintained back-end messaging systems and infrastructure using Amazon EC2 and Twilio for SMS and e-mail.

Software Engineer

June 2011 – March 2012

Yellowbook Inc

King of Prussia, PA

- Developed and maintained software systems to manage Yellowbook’s repository of digital business listings, advertisements, and related artifacts along with a web application for data management. Interfaced with several other systems including the CDN, artwork workflow, search, web, in-house ratings and review system, and billing.
- Managed an off-shore development team of three.

- Had the team adopt Behavior-Driven Development tools, which allowed business analysts to write automated software tests in a subset of plain English.
- Ported a set of ETL applications from C# to Java, which managed data feeds to third parties, including Google, Citygrid, and TomTom.

Research Engineer
Drexel University ACIN Center
Camden, NJ

November 2008 – April 2011

- Managed and oversaw the completion of several projects under contract with the DoD and assisted in writing proposals to acquire multi-million dollar contracts. Main focus was distributed messaging systems for SOA and intelligent agent based C² (Command and Control) applications. Other work included Biometric profile dissemination software.
- Researched, developed, and analyzed reliable group messaging systems for resource constrained networks using best of breed network emulation tools. Investigation areas included proactive vs reactive and hybrid service discovery approaches, and translating client/server software to use a peer-to-peer paradigm.
- The primary output of the research was a system called XOP (XMPP Overlay Proxy), which was a greenfield XMPP server implementation with several extensions that provided a peer-to-peer implementation of a subset of the XMPP protocol and extensions. This has since been ported to Android. Also developed integration layer for legacy DoD messaging systems.
- Received a research award from the Naval Research Labs for a paper that analyzed the performance of one system, which is now on the fast track to deployment in the field.
- Participated in live Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C⁴ISR) exercises with domestic forces. Supported coalition experiments with the German and French governments.

Software Engineer
Resource Utilization and Management Group
Comcast, Mount Laurel, NJ

September 2003 – November 2008

- Developed reporting, visualization, and integration layer for IP address utilization. Used for daily operations and to automate ARIN report generation to satisfy requirements for acquiring more address space. (perl, gd, mysql, php, apache httpd, ActiveMQ, JEE, Spring, Struts, Velocity)
- Worked with consultants to develop and optimize an IP Address Management System supporting over 2,000 users and hosting information for Comcast's national infrastructure and millions of customers.
- Developed software to mass import network addressing information from acquisitions.

Education

Bachelor of Science, Computer Science
Drexel University, Philadelphia, PA
Concentrations: Data Structures and Algorithms and Operating Systems

Skills

Operating Systems: Linux, OS X, Windows, Various Unix, Android

Languages: Groovy, Java, Ruby, SQL dialects, L^AT_EX, various scripting, markup, and templating. Capable of, and eager to learn new languages (Scala and Python are in the pipeline).

CASE Tools: IntelliJ IDEA, Eclipse, gradle, maven, ant, svn, mercurial, Jenkins/hudson, artifactory, redmine

Frameworks: Grails, Rails, Geb, Spock, angularjs, jQuery, Spring, Hibernate, various web, testing, and AJAX frameworks

Other: vim, apache httpd, various application servers, JMS/AMQP, Amazon AWS/EC2, wireshark, nmap, metasploit, XMPP

Publications

“Net-Centric Information and Knowledge Management and Dissemination for Data-to-Decision C2 Applications using Intelligent Agents and Service-Oriented Architectures.” I. Mayk, W. Regli, D. Nguyen, et al., Proceedings of the 2011 Military Communications Conference, Baltimore, MD, 2011.

“An Evaluation of Serverless Group Chat” Robert N. Lass, Duc N. Nguyen, Willam C. Regli. Military Communications. 7 November – 10 November 2011, Baltimore, MD

“Client/Server Messaging Protocols in Serverless Environments.” Justin Dean, Andrew Harrison, Robert N. Lass, Joe Macker, David Millar and Ian Taylor. Journal of Network and Computer Applications, 2011

“XO: XMPP Overlay Service for Distributed Chat.” Robert N. Lass, Joseph P. Macker, David Millar, Willam C. Regli, Ian Taylor. Military Communications. 31 October – 3 November 2010, San Jose, CA

“GUMP: Adapting Client/Server Messaging Protocols into Peer-to-Peer Serverless Environments.” Robert N. Lass, Joe Macker, David Millar and Ian Taylor Bio-Inspired Algorithms for Distributed Systems 2010 , 7–11 June 2010, Washington, D.C.

Professional Organizations

Association for Computing Machinery (ACM)
Member since 2012

Electronic Frontier Foundation (EFF)
Gold Member since 2011

Upsilon Pi Epsilon
International Honor Society for the Computing and Information Disciplines

Awards And Honors

Alan Berman Research Publication Award
Naval Research Labs, 2012

Current Interests

High Signal-To-Noise Ratio Development: convention over configuration, domain-specific language design, expressive and literate programming.
DevOps, build/test/release/deployment automation, and configuration management.
General hackery.