Contact Information

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Skills, Experience and Expertise

Specification, design, delivery and testing of high-value software systems.

Managing high-skill technical teams and technical innovation.

Technologies and techniques of software development.

Technology adoption for products, projects, programs and organizations.

Project management, program management, and project performance analysis.

Risk assessments, cost analysis, source selection and analysis of alternatives.

Public and private sector financial, accounting and revenue systems.

Work Experience

Senior Principal, Center for Enterprise Modernization, MITRE, 2008-present.

Principal, Center for Enterprise Modernization, MITRE, 2006-2008.

Lead Engineer, Center for Enterprise Modernization, MITRE, 2003-2006.

Software Development Consultant, Number Six Software, 2002-2003.

Senior Consultant, ACC, Integrated Business Solutions, Lockheed Martin, 2000-2002.

Senior Systems Engineer, Technical Operations, Lockheed Martin, 1999-2000.

Senior Consultant, ACC, Integrated Business Solutions, Lockheed Martin, 1998-1999.

Project Manager, Corporate Finance, MCI, 1996-1998.

Project Leader, Fidelity CAPITAL, Fidelity Investments, 1994-1996.

Senior Analyst, Fidelity CAPITAL, Fidelity Investments, 1991-1994.

Information Security Officer, Institute for Foreign Policy Analysis, 1989-1991.

Data Systems Officer, 1st Marine Division, U. S. Marine Corps, 1984-1988.

Education

Complex Systems Summer School, Santa Fe Institute, 2007

Master of Science with Honors, Systems Engineering, Johns Hopkins University, 2002

Dept. of Computer Science, Regis University, Denver, CO, 1999-2000

Certificate in Data Systems, Computers Sciences School, U.S. Dept. of Defense, 1985

The Basic School for Marine Officers, United States Marine Corps, 1985

Bachelor of Arts, Political Science, University of Colorado at Boulder, 1984

Certifications

Rational Software Corp., Certified Consultant and Instructor, 1998-2003

Borland, TogetherSoft for UML and Java, Certified Instructor, 2002

Lockheed Martin, Advanced Concepts Center, Certified Senior Instructor, 1998-2002

Research

Administrator, Public Revenue and Finance Research, MITRE, 2006-2009

Administrator, *Modernizing Services of Civil Government*, MITRE, 2008

Co-Principal Investigator, *SOA Services from Legacy Systems*, MITRE, 2006-2007

Contributor, *Biometrics Combat Identity Theft*, U.S. Dept of the Treasury, 2004

Sample Work Products

Assessment of IRS 2009 Filing Season Delivery, MITRE, 2009

Assessment of Cost Effectiveness of IRS Private Debt Collectors, MITRE, 2009

Assessment of IRS and FinCEN Currency & Banking Retrieval System, MITRE, 2008.

Schedule Analysis, IRS Customer Account Data Engine, MITRE, 2007

Source Selection Recommendations for IRS Modernized e-File, MITRE, 2007

System Release Plan and Re-Design, Account Management System, IRS, 2007

Enterprise Transition Plan, Internal Revenue Service, 2007

Java Programming Standards, Internal Revenue Service, 2006 and 2007

Performance and Capacity Model, IRS Modernized e-File, MITRE, 2006 and 2007

Independent Assessment of IRS Electronic Fraud Detection System, MITRE, 2006.

Code Review, IRS Modernized e-File, MITRE, 2006

Code Review, IRS Customer Account Data Engine, MITRE, 2006

Code Review, IRS e-Services, MITRE, 2005 and 2006

C++ Programming Standards, Internal Revenue Service, 2005 and 2006

Requirements and Design Review, IRS e-Services, MITRE, 2005 and 2006

Enterprise Transition Strategy, Internal Revenue Service, 2004 and 2005

Engineering Review, IRS Customer Account Data Engine, MITRE, 2004

Accuracy assessment of KBA-based *Pay.gov* Verification System, MITRE, 2004

Scalability Study of U. S. Treasury's *Pay.gov* System, MITRE, 2003

Selected Presentations

Object Conversion in Complex Type Hierarchies, Santa Fe Institute, June 2007

Unified Modeling Language for Complex Systems, Santa Fe Institute, June 2007

Analysis of Alternatives using the Analytical Hierarchy Process (AHP), MITRE, March 2004

Fundamentals of Bayesian Analysis, MITRE, March 2004

Models of Knowledge-based Authentication (KBA), NIST KBA Symposium, 2004.

Teaching Experience

OOA, OOD, UML/UML2, Rational Rose, Rational ReqPro; MITRE Institute; 2004-2009

OOA, OOD, UML, Rational Rose; Rational Software Corp.; 1998-2003

TogetherSoft for Java; Borland/TogetherSoft; 2003

RUP, OOAD, UML, J2SE, J2EE, XML, CORBA, UNIX, C++; Lockheed Martin ACC; 1998-2002

Introduction to MATLAB; Lockheed Martin Tech Ops; 2000

Book Reviews

Goldreich; *Computational Complexity: A Conceptual Perspective*, January 2010

Booch *et al*.; *Object Oriented Analysis and Design with Applications* (3rd ed.), September 2008

Ahern, Clouse and Turner; *CMMI Distilled*; January 2005

Seacord, Plakosh and Lewis; *Modernizing Legacy Systems*; September 2004

Maruyama *et al.; XML and Java: Developing Web Applications (2nd ed.)*; March 2003

Book Credits

Acknowledgement in *UML 2 Toolkit* by Erikson *et al*, 2004

Professional Development

Java on z/OS and WebSphere Compute Grid, IBM, Sept. 2009

Leadership Laboratory, MITRE, April-December, 2008

Algorithm Design and Code Generation with MATLAB, MathWorks, Oct. 2008

Advanced Enterprise Architecture Modeling with METIS, Troux Technologies, Oct 2005

Business Accounting, Georgetown University, Spring 2005

Capability Maturity Model Integration (CMMI), MITRE, Nov. 2004

Risk Management, Computer Sciences Corp., Sep. 2004

Fundamentals of Finance, Sloan School of Management, M.I.T., March 2002

Presenting Data and Information, Prof. Edward Tufte, Yale, Nov. 2001

Core Servlets and Java Server Pages (JSP), Marty Hall, SUN Microsystems, June 2001

Visual C++ Programming, Lockheed Martin, March 2000

Tools, Techniques and Environments

Rational Unified Process (RUP) and Capability Maturity Model Integration (CMMI).

Object oriented analysis and design (OOA/OOD), Unified Modeling Language (UML/UML2), structured analysis and design, flow charts, CRC cards and entity relationship design.

Software development using C, C++, Java, C#, HTML, XHTML, PHP, XML, and SQL.

PERT, GANTT and CPN analysis. Project and schedule management using Microsoft Project™.

Trade studies and analysis of alternatives such as Analytical Hierarchy Process (AHP)

Requirements specification, use cases and traceability matrices. Requirements tools such as Rational Requisite Pro and DOORS

Tools such as Rational Rose Enterprise and TogetherSoft Control Center. Techniques such as OMT, Booch and OOSE.

Integrated development environments (IDEs) such as Eclipse, Microsoft Visual Studio, NetBeans, DreamWeaver, and SlickEdit. Build tools such as make and Ant.

Messaging and integration systems such as MQSeries and webMethods.

Testing tools such as JUnit and NUnit. Test management tools such as Rational TeamTest and Robot. Various debugger, profiler and coverage test tools.

Change management tools such as ClearCase, ClearQuest, SCCS, CVS and SourceOffSite.

Windows, UNIX and other operating systems.

Affiliations

Member of the Association of Computing Machinery, IEEE Computer Society, and the Software Engineering Institute

Clearances and Background Investigations

Several current and active background investigations. Details available if needed.

References

See LinkedIn profile at www.linkedin.com/in/brianlawler. Additional references available.