

JOSEPH W. YODER
7 Florida Dr.
Urbana, Illinois 61801
(217) 344-4847
joe@joeyoder.com
<http://www.joeyoder.com>

OBJECTIVE

I'm currently focused on mentoring and consulting object-oriented technology, agile methodology and project management projects. Since the mid 1990s my focus has been many aspect of software development including frameworks, reusable architectures, adaptable and flexible systems, and lightweight methodologies such as Agile. I have developed frameworks, helped to design, implement and deploy several applications, and mentored many developers in building frameworks and enterprise components. I enjoy building elegant and successful systems, helping people succeed, and learning new things. I continue to provide analysis, design, and mentoring and to write papers that reflect on my experience.

EDUCATION

B.S. in Computer Science and Mathematics with a business emphasis at The University of Iowa; May 1989.

M.S. in Computer Science, The University of Illinois; May 1992; Ph. D. Work (Computer Science, partially completed).

Systems

IBM 370/333 (MVS), Prime 750/850, NEXT, SGI, VAX 11/780, Encore (UNIX), Apollo, HPs, OS/2, Sun, IBM PC-MSDOS, Macintosh, Windows NT /9X, Windows 2000, Windows XP, Windows Vista, Windows 7.

Languages

C#/.NET, Java, Smalltalk, Eclipse, PHP, JSP, Pascal, Lisp, Ada, Clu, "C", C++, BASIC, Assembly, Forth, FORTRAN, Lex, Yacc, Prolog, Scheme, Hypertalk, SQL, PERL.

Applications

Visual Studio; Eclipse; VisualWorks; IBM VisualAge Smalltalk and Java with VA Assist Window Builder; Distributed; ENVY; GemStone; Versant; JSP and J2EE, Paradigm Plus; Rational Rose; Corel; Xemacs; Vi; and many other editors; Microsoft Office; PageMaker; Oracle; DB2; ERWIN; Dbase IV; Lotus 1-2-3; Suntools; X-windows; LaTeX; Netscape and IExplorer; most UNIX apps and more.

COURSE HIGHLIGHTS

Object-Oriented Programming and Design (specifically using Smalltalk and Patterns); Programming with Pascal; Assembly Language Programming; Programming Techniques & Data Structures; Programming Language Concepts; Digital Systems and Computers; System Software; Algorithms and Data Structures; Software Engineering; Automata Theory, Formal Languages and the Theory of Computation; Numerical Analysis; Probabilities and Statistics; Calculus I, II, III; Differential Equations; Linear Algebra; Probability and Spatial Functions; Abstract Algebra; Discrete Structures; Programming Language Principles; Microprocessor Systems; Artificial Intelligence; Program Verification; Rewrite Systems; Concrete Mathematics; Numerical Approximation and Ordinary Differential Equations; Database Theory; Real Time Systems; Human Computer Interaction; Learning Theory; Computer Aided Design; Computer-supported Cooperative Work; Database Systems; Groupware and Collaboration Architectures.

HONORS

Excellent Teaching Award at [The University of Illinois](#), 1990 to 1994; High Distinction and Honors graduate in Computer Science and Mathematics at [The University of Iowa](#); The University of Iowa Academic Scholarship, 1985 to 1989; Dean's list ten of ten semesters; President's list January, 1987; Who's Who Among American High School Students during junior and senior year.

EXPERIENCE

Architecture and Design Consulting, Mentoring, and Teaching, Joseph W. Yoder Enterprises Inc and The Refactory, Inc; Urbana, Illinois. September 1998 to Present. I am currently working through a company I am a principal of called The Refactory, Inc. (www.refactory.com). I've taught and customize courses on Design Patterns, Java, C#, Agile Methods, Frameworks, Refactoring, Smalltalk Advanced and Beginner levels, and Testing. Currently I have led a team the last few years on the Architecture, Design and Development of Enterprise Business Frameworks specifically using Microsoft's .NET Frameworks. I was involved at the architectural level as well as design, development, and testing and implementation support to implement complex business rules for ordering, import, invoicing, print, shipping and warehouse management systems. Iron Mountain Fulfillment Services (IMFS) and The Refactory, Inc

I taught customized courses and/or provided consulting services for various sized companies including:

- Iron Mountain
- Caterpillar
- Motorola
- Cisco
- Med Impact
- US Navy
- Donovan Data Systems
- Illinois Department of Health

I have led business and technology teams to architect and design solutions for highly complex business and technology programs with the focus on applications using internet and distributed technologies. Much of my experience merges technology with business vision. As a senior architect I have been responsible for engaging the appropriate technology subject matter experts to drive the technology roadmap and achieve the business vision. As a senior level programmer, I consistently interact with IT and senior management with succinct and clear communication skills. I've used Agile practices to promote a learning and adaptive software development cycle that focuses on testing, iterative methods, and best practices.

I have mentored lead developers in the practices of Agile Software Development, such as eXtreme Programming. I have taught Object-Oriented concepts including Patterns and OO Programming for various languages, and have mentored many developers on the development applications being deployed in a live environment.

Project Manager, Architect and Designer, The Refactory, Inc; Urbana, Illinois. May 2003 to Present. I have provided consulting and mentoring services to Iron Mountain Fulfillment Services (IMFS), a medium-sized US document management and order fulfillment company. I have also acted as project manager regarding development of various. This C# .NET project involves the incorporation of Adaptive Object-Model technology for describing and building invoices to adapt to evolving customer requirements. The result is an invoicing domain-specific language that allows users to dynamically describe new invoicing rules and adapt to these changing requirements. Additional work has included conversion of existing warehouse applications into Microsoft Windows .NET C# applications running on SQL Server, for a medium-sized US document management and order fulfillment company. Additionally I worked on a C# .NET project involving the incorporation of Adaptive Object-Model technology for describing and building order imports to adapt to evolving customer requirements.

Principal and Owner, CU LocalBiz.com; Urbana, Illinois. September 1999 to Present and DSM Local Biz.com; Des Moines, Iowa. January 2001 to Present. I co-founded these companies in which I am the Director of Research & Development. These are local Internet companies that support local businesses getting online. I provide the technical support for the web-design, provide and maintain a Unix and NT Server for our businesses web pages, and overall management support for our companies.

Object-Oriented Consulting and Teaching, Joseph W. Yoder Enterprises Inc; Urbana, Illinois. September 1994 to December 1998. I have worked with Ralph Johnson teaching Object-Oriented Programming and Design (specifically using Smalltalk and Design Patterns). I also helped Ralph with his Summer Smalltalk class, taught a seminar on Design Patterns, trained Caterpillar developers on Smalltalk programming and designing our Smalltalk frameworks. I developed black-box frameworks for Caterpillar financial modeling and scenario planning. We provided knowledge-transfer of the technology to be used in-house. This included teaching object-oriented principles, Smalltalk mentoring, and assisting them with learning the details of the design of our framework. I have also provided consultation, mentoring and direct development support for various companies in setting up systems, networks, and servers. I have been teaching the principles of framework development using our black-box framework as an example for an OOPSLA tutorial.

Object-Oriented Consulting and Programming, ClearSystems; Dallas, Texas. June 1997 - September 1997. Providing high-level support of the design and implementation of a black-box framework implemented in VisualWorks under the ENVY development environment and integrated with Versant. We primarily provided for the clean up of their design, optimizing their code, and providing parallelization.

Project Manager, Research Analyst, Designer, and Programmer, CAT/NCSA @ University of Illinois; Urbana, Illinois. January 1994 to December 1998. This work has involved extensive research, design, and implementation of various projects sponsored by Caterpillar at the National Center for Supercomputing Applications. I was responsible for managing teams of 3-8 people on these various projects. These projects ranged from client-server information system applications mapping to relational databases, web-based applications to multi-tiered object-oriented applications involved with the details of running their business.

Project Manager, Architect, and Designer, New England Research Institute; Urbana, Illinois. September 1992 to 1995. Developed the architecture, and designed the specifications for the Blood Bank Analysis System sponsored as a Small Business Innovative Research Grant by the National Institute of Health. This system was developed as a generic framework for generating a class of these applications that allowed for different Blood Banks to easily install a new application and was designed and programmed using Object-Oriented. Work also included the management of the software development process from the requirements phase to the successful implementation and documentation.

Teaching Assistant, The University of Illinois; Urbana, Illinois. January 1990 to 1994. I received the Excellence Teaching Award every year. Following are the courses I taught at The University of Illinois.

- Introduction to Programming
- Discrete Mathematical Structures
- Data Structures
- Introduction to Theory of Computation
- Topics in Compiler Construction
- Concrete Mathematics
- Object-Oriented Programming and Design

Project Manager, Research Analyst, Designer, and Programmer, University Park Pathology Associates, P.C. and Lifespan Research Institute; Urbana, Illinois. August 1989 to 1993. Software projects include the development of many types of Medical Information Systems that ranged from decision support to assisting with the collection of physical findings and analysis of the findings. Work included the development and implementation of an expanded interface to a medical record prototype. Original work was done in the 1970's on Plato and I have developed a current interface for use on the Macintosh along with requirement analysis, internal specifications, and external specifications. Developed in-house tools for the computer-assisted design and implementation of interactive Health Risk Appraisal software. Defined user requirements and wrote functional specifications, implementing a methodology for design specification and its expansion into source code. Standardized graphical interface and code structure. Supervised the implementation of the tools. Provide for computer support through the research of proposed hardware and software solutions. There were various projects developed which can be found at: <http://joeyoder.com/research/projects>. The project management included creating delivery schedules and reporting progress to management and communicating design ideas and needs to customer and developers.

Honors Research, The University of Iowa; Iowa City, Iowa. August 1988 to 1990. Did research for an Honor's research project in Computer Science and Mathematics. The project is "The Use of Data Compression in Cryptography" and has included empirical testing that has provided scaling rules for different size alphabets. I have studied the security of a splaying algorithm proposed by Prof. Douglas Jones. Work on this project expanded my experience with Abstract Algebra, Probability and Statistics, Information Theory, Cryptography and Data Compression (specifically with the use of Splay Trees).

Project Leader, Individual Programming Project at The University of Iowa; Iowa City, Iowa. August 1987 to May 1988. I worked as a team leader on an independent studies project in Software Engineering with Professor Kung at The University of Iowa. This project was the design and implementation of an information system to be used by The UI Office of University Relations. Preliminary work included the development of Requirement Analysis for the information system using the Data Flow Specification Language (DFSL) in a team environment. During the development, Data Flow Diagrams were developed along with Data Dictionaries. Follow up work included further studies of software engineering techniques and the supervising/directing of the software development team. This supervising work involved: the coordination and guiding of team efforts; the evaluation of team progress; helping resolve communication problems; and offering experience where needed.

SOFTWARE PROJECTS:

I have been involved with quite a few projects over the years and the details can be viewed at:
<http://www.joeyoder.com/research>

PUBLICATIONS:

I am the author of over two-dozen published patterns and have been working with patterns for a long time, writing my first pattern paper in 1995, and have chaired various conferences such as PLoP , conference on software patterns.

I have written and published many other various papers and a detailed list can be found at:
<http://www.joeyoder.com/research/papers>

ACTIVITIES/INTERESTS

Personal computing, Tai Chi, photography, billiards, music, dancing, communication.

REFERENCES: Furnished upon request.