

Objective

To obtain a position where I can design and architect software systems, participate hands-on in the software development life cycle, and integrate software components into a final solution. Become an integral part of an agile development team of motivated individuals with high technical culture, whose ultimate priority is quality of code and delivered product or service.

Summary

Enthusiastic, hands-on professional, with a successful record of accomplishments in software architecture, design and development using a wide spectrum of technologies. Have experience in developing advanced multithreaded physically and geographically distributed, loosely coupled enterprise systems. Fluent with object oriented analysis and design and domain driven design, using various object oriented languages (C#, C++, Java).

Have passion for technical excellence and innovation. Practitioner of test driven development and industry best practices for testable software (inversion of control and dependency injection, mocking frameworks, automated unit testing and continuous integration).

Have formal academic background in the fields of computer science and project management. A strong advocate of agile, people-centric methodologies that encourage collaboration of self-organizing technical teams.

Professional Experience

Jun 2011 – Present **Bridgewater Associates, LP**
• Jun 2011 – Present Senior Software Engineer

Apr 2005 – Jun 2011 **Emdeon, Imaging and Data Capture Solutions**
(formerly Emdeon Business Services; WebMD; Dakota Imaging, Inc.)
• Apr 2007 – Jun 2011 Solution Architect/Software Architect
• Apr 2005 – Mar 2007 Software Engineer, Technical Lead

I served as a software designer and architect, leading three development teams (2 offshore and one onshore) on all software development projects in the imaging and data capture solutions division of Emdeon. Core contributor in all phases of the software development lifecycle for both new development and maintenance of existing software.

Major responsibilities included development of the baseline architecture for new solutions, development of the prototypes for technology and architecture evaluation, leading design phase, hands-on participation in the construction phase, mentoring QA teams, overseeing release and deployment processes.

Project: X-Ray Processing Workflow

Overview: Transform is a highly distributed data capture and transactions processing system, used for healthcare claims processing. The project added an x-ray processing service within this system. The solution encompassed a robust, extensible, multithreaded scanning application, inventory tracking infrastructure and search and retrieval functionality. The solution delivered a new service that allowed Emdeon to win new contracts for dental claims processing where handling of x-ray attachments is mandatory. I created the solution architecture, designed the scan client application and developed core software modules (application framework, domain model, introduced ORM and dependency injection components).

Technical aspects: .NET 3.5, C#, WPF, WPF Application Framework (WAF), Domain model, NHibernate ORM, NAnt. Applied layered architecture style using MVVM pattern with an addition of controllers. Loosely coupled composition using dependency injection (StructureMap) that simplified unit testing (NUnit, RhinoMocks). Integrated with existing unmanaged security infrastructure via P/Invoke. Search and retrieval implemented with IBM OnDemand.

Project: DocIT Reports

Overview: This project added a new reporting portal for the enterprise mailroom (DocIT) and delivered a platform to create consistent, reliable and customizable web reports, with minimal incremental development effort and rich functionality. I designed the reporting framework and developed core modules (data access layer, integration with unmanaged components).

Technical aspects: .NET 3.5, C#, ASP.NET 2.0, AJAX, CSS Data access through a specifically designed data access framework that provided data caching services and data aggregation capabilities over multiple distributed systems. Managed wrappers in C++/CLI over existing unmanaged components to integrate with the security infrastructure and file servers to access image repositories.

Project: Growth Service

Overview: The project added analytical reporting capabilities to the claims processing system Transform, by integrating it into the Oracle data warehouse and making it part of Emdeon's Business Intelligence suite. I designed a new data mart and corresponding ETL processes, to house paper claims data for reporting and analysis with SAP Business Objects. This allowed Emdeon to establish customer growth services, where patterns of paper claims submissions are analyzed to identify opportunities to migrate some of that volume to cheaper electronic format.

Technical aspects: Star schema in the Oracle 10g database. ETL process with Perl, SQL Loader, PL/SQL.

Project: Paper-to-EDI Conversion

Overview: Architected and designed integration of imaging, data capture and forms processing system "Transform" with multiple systems in EDI workflow (clearing house, printing and fulfillment services, reporting repository, advanced claiming system, business intelligence data warehouse). This integration opened new venues for revenue for the company through cross-selling services, consolidating maintenance and customization costs and streamlining system operations.

Technical aspects: Inventory and image repository exposed via web services (Perl, SOAP::Lite). Integrated with EDI mainframe system via FTP, using X12 format.

Project: Transform 9

Overview: Transform system is a highly distributed (physically and geographically) heterogeneous data capture and transactions processing system with scalable server endpoints, distributed workflows, user-facing client applications and web-facing reporting portals. This project aimed to reengineer security infrastructure of the system to make it compliant with CMS security requirements. Completion of the project allowed Emdeon and its customers to bid for new contracts (i.e. Medicaid), which have very strict security regulations, thus increasing company's revenue.

Technical aspects: Communication protocols security HTTPS, FTPS, LDAP over TLS. PKI architecture using X.509 certificates to protect sensitive information within LDAP directory. Windows single sign-on for user-interactive application. Full security audit of user and software activities with event log on Windows and Syslog on UNIX.

Project: Health Claim Expert

Overview: Designed a highly customizable data validation and editing system – Health Claim Expert (HCE) – that operates on professional, institutional and dental health insurance claims using raw data capture results (OCR and KFI). It delivers 99.8% quality data, maintaining a high level of operator productivity and utilizing "Key What You See" paradigm for manual steps of the process. It also allowed the company to get up to 25% data quality increase across multiple clients with different data capture and validation requirements.

Technical aspects: Layered framework in Perl. Data storage, search and retrieval structures and algorithms in C, highly optimized for speed and large volumes using sparse arrays with access speed of O(1). Data parsing algorithms with artificial intelligence, based on voting and pattern recognition.

Aug 2002 – Apr 2005 **MBS Ltd. (Mega Business Software), Ukraine**

Positions:

- May 2003 – Apr 2005 Senior Software Engineer, Technical Lead
- Aug 2002 – May 2003 Software Engineer

I worked as a technical liaison between offshore engineering team in Ukraine and technical staff in USA (Dakota Imaging, Ltd). Collaborated with architects, designers and senior engineers in US to define design specifications for software development projects, and worked with offshore team as a technical lead and a hands-on engineer to complete development and QA and turn the software to the client.

Project: DocIT

Overview: DocIT is an enterprise mailroom automation system, part of a distributed data capture and transactions processing system. It streamlines mailroom processes, removes manual sorts, provides highly accurate automatic paper classification, sorting and batching capabilities and significantly reduces required workforce to run a mailroom. It also includes a scalable user-facing manual exceptions handling application. This project significantly reduced mailroom costs in Emdeon, eliminated complex paper sorts, reduced classification error rate and transactions turnaround time.

Technical aspects: C++, STL, finite state machine built in C++ to visualize transactions workflow definition. Multithreaded multi-instance server core for parallel transactions processing. User facing component MFC, C++, STL.

Project: WebSearch

Overview: This project delivered a new customer-facing web portal for image search and retrieval. I designed and implemented portions of core components, such as data access layer, auditing module and image access components.

Technical aspects: Java, JSP, Servlets, CSS, JavaScript. Hosted under TomCat behind Apache web server on Red Hat Linux. The portal was implemented as a web farm behind F5 load balancer. Backend database – Sybase ASE.

Technical Skills

SDLC Methodologies

- Agile (Scrum, XP); Unified Process and RUP; Test Driven Development

Software Architecture/Design Methodologies/Patterns/Tools

- Zachman Framework, TOGAF
- Domain Driven Design, Layered Architecture, ESB/Messaging Architecture, SOA, REST, CQRS, MVC
- UML, IDEF1X, DFD
- Visual Modeling Tools (Enterprise Architect, Rational Rose, ER Win)

Technologies/Frameworks

- Microsoft .NET (WPF, ASP.NET, ASP.NET MVC, WF, WCF, P/Invoke, OSS/ALT.NET frameworks)
- Unmanaged multithreaded, multi-process programming, Win32, STL, MFC, COM, ATL, ActiveX
- J2EE

Programming Languages

- C#, C++, C++/CLI, F#, C, Java, Perl, PowerShell, VB.NET
- HTML, CSS, JavaScript, jQuery, AJAX, JSON, ColdFusion
- ANSI SQL, Transact SQL, PL/SQL
- XML and related technologies (XML, XSD, XSL, SOAP)
- Install Shield, Visual Studio Installer

Database Management Systems

- Microsoft SQL Server 2005, 2008/R2; SSIS, SSRS
- Sybase Adaptive Server Enterprise, Sybase Adaptive Server Anywhere
- Oracle 8i, 10g
- OLAP, Data Warehousing, Business Objects

Security/Compliance

- X.509/PKI, SSL, encryption
- HIPAA, CMS, SOX, SAS 70

Other

- Project Management (MS Project, VersionONE, Mingle)
- Configuration Management (Clear Case, Subversion, Git, CVS, Source Safe)
- Messaging (Tibco EMS, MSMQ, NServiceBus, JMS)
- Unit testing (MSTest, NUnit, CppUnit, JUnit, Rhino Mocks)
- Build and Continuous Integration (MSBuild, Ant/NAnt, TeamCity, CruiseControl)

Education

M.S.C.S, <i>cum laude</i>	National Technical University “Kharkiv Polytechnic Institute”, Ukraine;
B.S.C.S, <i>cum laude</i>	Faculty of Computer Science and Control; Chair of Computer-aided Management Systems.
M.S.P.M, <i>cum laude</i>	National Technical University “Kharkiv Polytechnic Institute”, Ukraine;
	Faculty of Computer Science and Control; Chair of Strategic Management.
B.A. in Translation of Scientific and Technical Literature	National Technical University “Kharkiv Polytechnic Institute”, Ukraine;
	Faculty of Studying by Correspondence; Chair of Foreign Languages in Business.

References available upon request