

Brian Hetrick

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Summary

An experienced, full stack, Microsoft ecosystem, lead software engineer with specialty knowledge of distributed systems and applications, data security, medical systems, real time systems, and mechatronics.

Individual Contributor Skills

Windows/Linux

- C, C# expert
- .NET 2.0 through 4.6, Mono
- Interfacing managed and unmanaged code (P/Invoke, COM)
- WinForms, WPF, Gtk#, Xamarin Forms, curses
- Windows included services (BITS, ESE, IIS, etc.)
- C++, Java SE/AWT/Swing experience

Middleware

- MSMQ, RabbitMQ
- ASP.NET, SOAP, REST, WCF, WebAPI, XML
- Networking (TCP/IP, UDP)

Back End

- SQL Server, Oracle (SQL, NHibernate, ADO.NET, ODBC); NoSQL (KVP, wide column)
- Secure IIS- and self-hosted web services
- Windows services

Specialty Technologies

- Encryption, data transport security, data storage and access security
- Medical systems (HIPAA compliance, clinical to software criteria transformation)
- Software-controlled mechatronic systems
- Embedded microcontroller/DSP/SBC real time systems
- Windows .NET soft real time systems (multithreading, eventing)
- PC/PLC/Embedded system communication, command, and control (CAN, CANopen, IEEE 802.15.4, I²C, SPI, serial, USB)
- Embedded system understanding (ADC, DAC, DVM, digital logic, frequency analyzer, interrupt-driven, oscilloscope, schematics, simple analog)
- Device manufacturability and serviceability
- Application and adaptation of open source technologies

Team Lead Skills

- Full life cycle including initial conceptualization, requirements analysis, specification, design, implementation, unit and system testing, acceptance testing, deployment, active enhancement and support, legacy status support, and product retirement
- Creating consensus among technical stakeholders as to overall function, architecture, and constraints
- Introducing and maintaining performance- and reliability-enhancing processes including Agile methodologies, Inspections, design and code reviews, change control, and unit tests
- Encouraging and aiding team formation and maturation, cross-training, technology and expertise transfer

Project Lead Skills

- Eliciting business concepts, needs, and risks from management and operational personnel
- Exposing conflicting expectations among stakeholders, and creating consensus among business stakeholders regarding goals, roles, and acceptable risks
- Translating operational business needs into technical requirements, specifications, and plans
- Introducing and maintaining process manageability including earned value analysis, task completion criteria, intermediate deliverables, and root cause analysis
- Identifying business, technical, and process risks, creating project plans, and acquiring stakeholder and development team buy-in
- Tracking and communicating status, identifying and correcting deviations from plan, identifying and recovering from risk materialization

Recent Professional Experience

Segway, Inc. (April 2014-November 2016)

Senior Software Developer

Technologies: ADO.NET, ASP.NET, BITS, C, C++, C#, CAN, CANopen, ESE, I²C, log4net, managed/unmanaged interfacing, MEF, MPLAB-X, MSMQ, MySQL, .NET (2.0 through 4.6), NHibernate, NLog, NUnit, Oracle, PRISM, Rabbit MQ, soft real time (eventing, multithreading), SPI, SQL Server (2008 through 2016), Subversion, Unity, USB (1.1 through 3.1), Visual Studio (2010 through 2015), Web applications (ColdFusion, Silverlight), Web services (REST and SOAP), WCF, Windows Services, WinForms (including custom controls), WPF (including custom controls), XAML, XML

Contributions: Design and implement security protocols for Internet-exposed web services. Specify and develop manufacturing support and service support software for both new and existing product lines. Maintain, enhance, and create new product test device software. Design hardware and create embedded and host software for new product test devices. Specify and develop customer-facing API for robotics platform. Maintain, enhance, and create new internal process software. Move primary production database from Oracle DBMS to SQL Server.

IntrinsicQ, An AmerisourceBergen Specialty Group Company (2011-March 2014)

Senior Software Developer; Technical Lead

Technologies: ADO.NET, C#, HL7, LINQ, .NET 4.0, NUnit, SQL Server (2008 and 2005), TFS, Visual Studio (2010), WCF, Web services, Windows Services, WinForms (including custom controls), WPF, XML

Contributions: Maintain and develop medical oncology practice support system. Diagnose and repair complex interactions. Design and implement user experience additions and database additions. Re-factor subsystems for increased reliability and maintainability. Train and mentor junior developers.

A123 Systems, Inc. (2010, contract)

Developer, Engineering Services

Technologies: ADO.NET, C#, ClickOnce, .NET 4.0, LINQ, SQL Server (2008), SubVersion, Visual Studio (2008 and 2010), WCF, WinForms (including custom controls), XML

Contributions: extend existing application to new user base and functionality. Design and implement user experi-

ence additions, database additions, business object wrappers. Extend existing application architecture. Repair and re-factor existing application code as needed.

Goss International Americas, Inc. (2007-2009)

Senior Project Engineer, Software Engineering

PPS: Next generation newspaper post-press planning system, new development

Technologies: ADO.NET, C#, MSMQ, NDoc, NHibernate, NUnit, SQL Server, Visual Studio, WPF, Windows Services, Windows Server and XP, XML

Roles and contributions: developer, software engineering process consultant. Lead team formation. Assisted in determining requirements, technologies, product design. Introduced requirements and design reviews, requirements traceability, unit testing. Improved change control processes. Specified, designed, developed, tested, integrated functionality into new product.

OmniCon: Newspaper post-press control system, soft real time, maintenance

Technologies: ATL, C++, COM, cppUnit, SQL Server, Windows Server, XML

Role and contributions: developer. Introduced unit tests, internal documentation. Performed corrective maintenance, feature addition.

OmniZone: Interface existing post-press planning system with external vendor's warehouse management system; feature addition

Technologies: ADO.NET, C#, multithreading, NDoc, .NET 2.0, NUnit, SQL Server, TCP/IP, Windows Server, Windows Services, XML

Role and contributions: Gather and analyze requirements. Negotiate interface with vendor. Specify, design, implement, test, document, package, deliver software.

Professional Associations

- IEEE Computer Society
- IEEE

Education

- Master of Science in Engineering (Mathematical Sciences), Johns Hopkins University
- Bachelor of Arts (Mathematics), College of the Holy Cross