Keith Brown

https://keithbrown.github.io

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Summary   Senior software engineer with 20 years of experience developing products and providing customer support and training in multiple industries.

Experience

One Fact Inc   *Nov 2014 - present*

Customer Support Manager / Senior Software Engineer. Charter member of software services company created to support customers using xtUML for model-driven development and the open-source BridgePoint toolchain. Various responsibilities including interfacing with customers, software development and testing, project management, sales, training, and documentation. Highlights include:

- Customer Support and Sales
  - Organized and lead meetings with customers. Delivered project status, maintained rapport, solved problems, defined new projects.
  - Provided phone, email, desktop sharing, and on-site resolution of issues
  - Used redmine issue tracker to manage customer issues and projects
  - Co-author numerous Statement of Work and Software Requirement Specification documents and sales presentations
- xtUML and MDD Advocate
  - Attended and spoke at international conferences to promote xtUML and model-driven development (MDD). Assisted in the organization of, and presented at, xtUML Days conferences.
  - Eclipse Papyrus Architecture Committee Member
- Software development. Involvement in all phases of software development from requirements gathering through development, testing, and delivery. See my development history at https://github.com/keithbrown.
  - Developed eclipse plug-ins for model driven design using Java and xtUML
  - BridgePoint Model Compiler: Use custom language to develop tools to translate xtUML models into C, C++, and SystemC
  - Participated in BridgePoint open source software chat rooms, forums, and issue tracking
  - Mentored junior team members and interns working in the US and Egypt
  - Wrote product documentation
  - Application testing on Windows, MacOS, and Linux using virtual machines
  - Rigorous daily use of development process including configuration management, documentation and issue tracking tools
  - Supported maven-based build and packaging and jenkins build server running on AWS EC2
- Release Captain. Software release project management. Used issue tracking systems to manage tasks for releases using customer input. Monitored progress of development against delivery schedule. Managed all data for Windows, MacOS, and Linux installers. Final QA testing. Created and delivered product documentation and software build to customers using AWS S3.

Mentor Graphics - A Siemens Business   *Apr 2005 – Nov 2014*

Software Engineer. Application developer and technology instructor on a distributed international team responsible for the BridgePoint software modeling product and xtUML method. Highlights include:

- <u>Software development.</u> Participated in full software development lifecycle for many fixes and new features.
  - Developed eclipse plugins with Java and xtUML. Fixed issues and added enhancements to model compiler with RSL.
  - Used strong configuration management practices and process.Created hooks to link CVS and SVN check-ins to ClearQuest via socket-based XML interface.
  - Prototyped Service Oriented Architecture for model translation with node.js
  - Managed Java-based Installer
- <u>Technical Support & Training.</u>
  - Provided phone, email, desktop sharing, and on-site problem resolution of customer issues
  - Created materials for and delivered three day classroom training session in Budapest, Hungary focused on understanding and extending xtUML Editor
  - Created materials for and delivered three day classroom training session in Philadelphia focused on System Modeling with BridgePoint
  - Created and delivered xtUML overview presentation at Real-Time Embedded Conference (RTEC) in Boston
  - Interfaced with attendees at Mentor Graphics booth at Embedded Systems Conference, RTEC, and customer-site technology days
- <u>Project Lead, Online Courseware.</u> Managed creation of WordPress-based courses hosted on www.xtuml.org. Chose learning management system. Created and edited instructional videos with Camtasia Studio. Managed and organized content. Coordinated contributions from team members.
- <u>Release Captain.</u> Created and maintained build automation using Perl, bash, and ant. Software release project management. Performed final QA testing. Created and delivered documentation and software master to order fulfillment division.

MailCode, a Pitney Bowes Company   *Apr 2001 – Apr 2005*

Software Engineer/Senior Software Engineer. Numerous simultaneous application development projects primarily using Visual C++ in Windows. Several project management roles. Highlights include:

- <u>Software Project Lead,</u> Olympus FP & Olympus LR. Responsible for software requirements implementation for mail sorting machine. Created and managed software development team schedule using Microsoft Project. Interfaced with customer engineers to define software database interface through stored procedures. Developed extensions to existing software to support new PLC, data logging, in-line scale, label printer, and stacker. Interfaced with hardware development engineers to coordinate development and implementation. Software representative for multiple on-site installs. Implemented use of Bugzilla for issue tracking by hardware engineers.
- <u>Transport Control Lead.</u> Primary maintainer and developer for machine control software. Responsibilities included: customer and engineering support and issue resolution, new feature development, develop interfaces to new hardware and software components, maintain machine configuration and installation software.

Logikos Systems and Software   *Jun 1998 – Apr 2001*
Senior Software Engineer. Numerous application development projects using Visual C++ and other languages in various environments including Windows, Linux, and Windows CE. Served as a recruiter at many college job fairs. Highlights include:

- <u>Embedded software test application.</u> Implemented and maintained COM objects using Visual C++ that tested features of a vehicle Electrical Systems Controller using vehicle simulation hardware and a Windows NT control station.
- <u>Diabetes management software.</u> Prototyped ADO database back-end code. Researched and authored numerous trade studies. Implemented database back-end using Visual C++ bindings to ADO. Designed and developed MFC-based and non- MFC ActiveX controls. Performed black box application software testing.
- <u>GUI front-end developer.</u> Created UI for "grep" using Qt and KDE toolkits on Linux.

Bioanalytical Systems   *Jun 1997 – Jun 1998*
Webmaster/Developer. (Part-time) Redesigned company website. Implemented new functionality for analytical instruments using C. Created instrument LCD simulation tool in Perl/Tk to automatically generate random, but valid, serial communication packets that conformed to a rule-based testing script.

Purdue University Libraries   *Jan 1997 – Jun 1997*
Student Programmer. (Part-time) Created a web-based (cgi) instructional program using C that served and tracked users' progress through an interactive tutorial about using the Purdue Libraries' computer catalog system. Programmed utilities to assist the system administrator.

Education

B.S. Computer Science, Purdue University | West Lafayette, IN

Technologies

- xtUML, Java, Eclipse, C, Visual C++, Perl, bash, ant, ANTLR, ADO, COM, MFC, STL, node.js, Python
- Markdown, AsciiDoc, WordPress, google g suite, GIMP
- Git & GitHub, CVS, Subversion, Perforce, Visual SourceSafe
- Redmine, GitHub Issues, bugzilla, ClearQuest
- Windows, Linux, MacOS, Amazon Web Services EC2 & S3

Publications

1. Author and Presentation: Brown, Keith. **Navigating the Rover with xtUML**. *MDETools'18 @ MODELS Conference*. 2018. Copenhagen, Denmark. http://ceur-ws.org/Vol-2245/mdetools_paper_10.pdf.
2. Presentation: **10 Steps to Enhancing BridgePoint**. *xtUML Days*. 2018. Copenhagen, Denmark. http://bit.ly/2GDJPGB
3. Presentation: **Roving with xtUML**. *xtUML Days*. 2018. Copenhagen, Denmark. http://bit.ly/2H3tJFD
4. Presentation: **Issue Tracking Best Practices**. *xtUML Days*. 2015. Lafayette, IN. http://bit.ly/2BOPWn4
5. Author: Brown, Keith. **Rules-based Code Generation**. *xtuml.org.* 2007 https://bit.ly/2XiKO43

Volunteering

- Boy Scouts of America: Merit Badge Counselor, Troop 303 Committee Member
- American Heritage Girls: Merit Badge Counselor, Troop IN 2024 Adult Leader
- St. Lawrence Church: Religious Education Teacher