

Robert G. Kainz
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Current resume available at RobertKainz.com.

Objective:

To help design and implement stable, reliable, fault tolerant, efficient, scalable, and universally accessible information systems using:

- modern development methodologies utilizing my strong object-oriented analysis and design/development skills
- modern platforms that are reliable and secure
- modern technologies such as JEE, RoR, Flex, Oracle, XML, and open source solutions where possible to reduce costs.

Skills:

- *Development:* Requirements analysis, software design and implementation, database and application server analysis, design and implementation, hardware / software / OS integration, testing, documentation, and developer training.
- *Languages:* JAVA/JEE (including EJB, servlets, portlets (including JSR168), Struts, JSP, Ant, web services, SOAP, JMS, JDBC, JTA, JavaBeans, Java RMI, Java Comm API), Ruby on Rails (various plugin experience, restful web services), Adobe Flex 3, C++, Visual C++, XML (SAX and DOM parsers including libxml2, Xerces), Objective-C, Visual Basic (including writing of add-ins and ActiveX controls), UML, Oracle Developer 2000, SQL, PL/SQL, HTML, Javascript, JSON, LISP, and Motorola 68K Assembler.
- *Applications and misc:* WebSphere Application Server V2, V4.x, V5.x, V6.x, V7.x, WebSphere Portal 4.x and 5.x, WSAD, RAD 7, Apache, IBM HTTP Server, JBoss 3.2.x, Tomcat, Jetty, Entrust GetAccess 7.1 SP2 (server, SDK and runtime), ESRI 9.1 software (including ArcSDE, ArcIMS, ArcCatalog, ArcInfo, and ArcMap), Sphinx, IBM WebSphere MQ (formerly MQSeries), Load Runner 7.81, Rational Rose, Visual Slick-Edit, Visual Studio, Visual Age for JAVA, Apache, SSL, VMWare, Parallels, MS Office, Dreamweaver, TOAD, Druid, HAT (Heap Allocation Tool), Tivoli Performance Viewer, OptimizeIt, JProbe, WordPress, PD4ML and many more.
- *Databases:* MySQL, Oracle, PostgreSQL, DB2, Cloudscape, HSQL, McKoiDB and MS Access.
- *O/S Experience:* Linux, Mac OSX, Sun Solaris 8, IBM AIX 5.1, Windows 3.1/95/98/NT/2000 Advanced Server/2003 Standard Server/XP and DOS.
- *System Administration:* Sendmail / procmail, Spam Assassin, qpopper, dovecot, SSL certificates, iptables, rsync, SSH, telnet, ftp, apt-get, rpm, etc.

Patents:

- 8,001,481 (August 16, 2011) Implementation of an interactive progress bar in a test application environment.

Training:

- Sun Certified JAVA Programmer 1.1.
- IBM Certified Solution Developer, IBM WebSphere Application Server, Standard Edition, V2.
- Completed the IBM WebSphere Application Server Development – Mentored Workshop.
- Completed the ESRI Building Geodatabases I course.
- Completed Introduction to Web Services with IBM Rational Application Developer V6.0 XM281 on 2007-04-03.
- Completed Intermediate Web Services with IBM Rational Application Developer XM481 on 2007-04-06.
- Completed the Obtiva Ruby on Rails TDD Boot Camp in June, 2007.

Experience:

Senior Software Engineer

Roadie Rage, Inc., Cary, NC

11/11 to 3/12

Client: Dynamic Information Solutions, LLC

Oracle 10g, PL/SQL, jQuery 1.7.1, jQuery UI 1.8.16, Oracle Java Procedures, TOAD, PD4ML

- Created a web application using Oracle PL/SQL and HTML/jQuery for managing and collecting users' interests and preferences.
- Integrated the interests and preferences application into the customer's online membership signup application and their user profile management application.
- Re-engineered the customer's membership signup web application.
- Created an Oracle interface for PD4ML, a commercial Java solution for exporting HTML documents as PDFs. This interface and PD4ML were deployed on Oracle, making PD4ML functionality available to Oracle PL/SQL applications.

Senior Software Engineer

Roadie Rage, Inc., Cary, NC

7/09 to 10/11

Client: TES – The Employment Solution, Northrop Grumman IT, USPS

Java/JEE, JSP, servlets, JDBC, JavaBeans, XML, Oracle 9i/10g, Oracle Java Procedures, PL/SQL, jQuery 1.3.2, jQuery UI 1.7.2, Subversion, TOAD

- Added new features to the USPS AIMS system (Asset Inventory Management System).
 1. Extensively re-engineered many parts of the system to add ability for field personnel to manage and query the system from both district and support program perspectives.
 2. Improved and simplified parts of the user interface by using jQuery core and UI widgets.
 3. Improved the custom query functionality in a number of different ways.
 4. Created a reusable JSP tag library for managing a user interface breadcrumb trail and integrated it into the application.
 5. Wrote Oracle stored procedures to insert assets from designated Excel spreadsheets and configured Oracle so they would run nightly.

- 6. Updated user documentation to include topics for new features.
- Migrated AIMS from Java 1.3 to Java 1.4.
- Subversion
 1. Installed and configured Subversion server and clients.
 2. Imported AIMS source code into newly created AIMS repository.

CEO, CTO and Software *Developer*

Roadie Rage, Inc., Cary, NC

4/08 to 7/09

Ruby on Rails, Flex 3, MySQL, Objective-C, Ubuntu Linux, HTML, Javascript, SQL, Sphinx, Perl, Geo::Coder::US Perl API, Subversion, Apache, XML, Web Services, WordPress, sendmail / procmail, Spam Assassin, qpopper, dovecot, SSL certificates, iptables, rsync, SSH

- Solely designed, developed, deployed and maintained all Roadie Rage's web sites, including its flagship application. Roadie Rage provided software services to musicians, music lovers and music-related businesses.
 1. Developed rich Flash UI using Adobe Flex 3.
 1. Media player widget.
 2. Created hierarchical list browser component similar to iTunes'.
 3. Smoothly integrated affiliate product catalog into user interface, providing full text search capabilities via Sphinx.
 2. Developed server in Ruby on Rails.
 1. Created application for musicians to post and share streamable and downloadable MP3s with Roadie Rage users.
 2. Further developed single sign on features.
 3. Built a custom cache solution for providing library of music as static, compressed XML files for highly efficient servicing of requests by Apache (bypassing the Rails server completely in most cases).
 3. Considered business plans, models and opportunities.
 4. Hired and managed additional executives, IT support staff and software developers.
 5. Produced and posted Roadie Rage promotional video on YouTube.
 6. Developed iAirGuitar for the iPhone / iPod Touch to promote Roadie Rage.
 7. Produced high quality video / audio recordings available on YouTube for excellent fusion band, Baltic Avenue.

Senior Software Engineer

Railinc, Cary, NC

1/06 to 4/08

Java/JEE, Struts, EJB, JSP, servlets, JMS, web services, SOAP, JDBC, JTA, Ant, Clearcase, Subversion, Ruby, UML, HTML, Javascript, SQL, PL/SQL, XML, JSON, WebSphere Application Server V6.x, RAD 6, Tomcat, Entrust GetAccess 7.1 SP2 (server, SDK and runtime), ESRI 9.1 (ArcSDE, ArcIMS, ArcCatalog, ArcMap), SSL, TOAD, Oracle 10g, DB2, MySQL, Red Hat Linux ES, Sun Solaris, Jprobe, Apache

- Developed, deployed and maintained Railinc's Single Sign On application in development, test and production environments.
- Contributed numerous features and enhancements to SSO including:
 - Wrote a more powerful dynamic search API for finding GetAccess users.

- Created a nice interface for importing configuration data for SSO applications using XML to streamline and reduce errors while configuring SSO for those applications in different environments.
- Wrote most of the customized GetAccess extension code to handle Railinc business rules including generation of cookies needed for basic authentication with Sharepoint.
- Modified GetAccess' behavior in order to allow users to log in as other users without needing to know the other users' passwords.
- Wrote an SSO developer hack so that developers could easily bypass use of a real SSO server in their local IDEs.
- Wrote a JAAS login module that authenticates web services users with the SSO application.
- Wrote efficient PL/SQL stored procedures to do some complex, nightly merging of hierarchical railroad mark data for use with SSO.
- Wrote Ruby and PL/SQL scripts to massage user and role data from previous systems for insertion into SSO.
- Successfully migrated many of Railinc's applications and their users/roles from their older customer registration application to SSO.
- Successfully integrated a number of new Railinc applications with SSO.
- Successfully transitioned SSO to maintenance team
 - Wrote thorough, first rate documentation on company wiki.
 - Extensively trained software developers on maintenance team.
- Designed, developed, deployed and maintained Railinc's GeoTool mapping application (phase one and phase 2), almost completely by myself. GeoTool was designed to be used by any Railinc application that needs to show a map or allow selection of items on a map.
 - Based on ESRI's ArcIMS and ArcSDE products.
 - Extensively modified ESRI's legacy javascript framework code for their HTML viewer application to allow the same application to be used by multiple Railinc applications in different ways.
 - Installed and configured ESRI's ArcIMS and ArcSDE servers on Linux boxes in development, test and production environments.
 - Wrote scripts to import track and station data into ESRI's ArcSDE database.
 - Helped integrate GeoTool with Railinc's Embargo application.
- Converted old ColdFusion application called Circular OT5 to Java.
- Deployed Circular OT5 in development, test and production environments.

Java Developer, Contractor

InCentric Solutions, Durham, NC

4/05 to 1/06

Client: Railinc

Java/JEE, Struts, EJB, JSP, servlets, JMS, web services, SOAP, JDBC, JTA, Ant, Clearcase, Subversion, UML, HTML, Javascript, SQL, PL/SQL, XML, JSON, WebSphere Application Server V6.x, Entrust GetAccess 7.1 SP2 (server, SDK and runtime), SSL, TOAD, Oracle 9i, DB2, Sun Solaris, Apache

- Developed, deployed and maintained Railinc's Single Sign On application in development, test and production environments. SSO is one of Railinc's most critical applications and simply cannot afford any unexpected outages. SSO provides authentication and authorization services for most Railinc applications. Please see my more recent Railinc work experience for details concerning development activities.
- Installed and configured most components of SSO including:
 - Entrust GetAccess 7.1 SP2 server cluster, runtimes and SDKs
 - Apache/IHS web servers
 - SSO application

Senior Application Development Specialist (Portal Test Team), Contractor

Ajilon, Durham, NC

12/02 to 3/05

Client: IBM

Java/JEE, servlets, portlets, RMI, JSR168, JSP, Struts, EJB, JMS, web services, SOAP, JDBC, JTA, Ant, XML, UML, SQL, PL/SQL, DB2, HTML, Javascript, JSON, Lucene, WebSphere Application Server V4.x, V5.x, V6.x, WebSphere Portal V4.x and V5.x, WSAD, RAD 6, IBM HTTP Server, Jboss 3.2.x, Tomcat, Jetty, MQSeries, Load Runner 7.81, Rational Rose, SSL, VMWare, Oracle, Cloudscape, Linux, Sun Solaris 8, IBM AIX 5.1, Windows 3.1/95/98/NT/2000 Advanced Server/2003 Standard Server/XP and DOS, Tivoli Performance Viewer, HAT, CMVC.

- Solely designed and developed a popular IBM internal web-based automated test execution framework I named "Squash" initially for the Portal test teams. It allows test team members to execute and track automated SilkTest, Rational Functional Tester and STAX automation scripts from a web browser against the latest product builds, which in our case are usually IBM's WebSphere Portal 4.2.x and 5.x products. Its simple and intuitive interface and reliability under load have led to the adoption of the tool by other teams at IBM for similar purposes. The tool is a Java J2EE application written using XML, EJB, JSP, JDBC, DB2, JBoss, IBM's WSAD IDE and various open source technologies.
- Deployed and administered Squash on several Linux servers for use by the Portal test teams and automation script developers in running automated regression test cases.
- Solely designed and developed a popular web application I originally named "Bug Ranger" that adds a full text search index and a Google-like UI for CMVC defect/feature abstracts and notes. Many IBM development and test teams across the world are deploying my application to make up for this lack of functionality in IBM's CMVC product. This application uses the popular open source Lucene library.
- Deployed and administered Bug Ranger for use by the global WebSphere Portal test and development teams.
- Developed JSR168 compliant portlets for further testing of the Portal container than was covered under the TCK. These portlets uncovered additional defects that were fixed prior to shipping the Portal 5.0.2.1 release.
- Developed a Struts application for WebSphere Portal to test Portal's Struts 1.1.0 support.

- Wrote and executed robust Load Runner scripts for testing various portlet applications including "Portable Document Manager" and "Common PIM Portlets".
- Manually executed a variety of test cases with several different configurations (mostly on Solaris, AIX, Linux and Windows using IBM HTTP Server, IIS6 and DB2), as well as many automated tests via the web-based execution framework I created.

WebSphere SVT Group Member, Contractor

Ajilon, Durham, NC

4/02 to 12/02

Client: IBM

Java/JEE, Ant, EJB, JSP, servlets, JMS, web services, SOAP, JDBC, JTA, XML, UML, SQL, PL/SQL, DB2, HTML, Javascript, JSON, WebSphere Application Server V4.x, V5.x, WSAD, IBM HTTP Server, MQSeries, SSL, Cloudscape, Linux, Sun Solaris 8, IBM AIX 5.1, Windows 3.1/95/98/NT/2000 Advanced Server, OptimizeIt, HAT, CMVC

- Developed EJB applications that utilized session, entity and message beans for use in WebSphere Application Server 5.0 system testing.
- Executed a variety of test case scenarios on several platforms, including Linux (RedHat, SUSE and MontaVista), AIX, Solaris and Windows NT/2000. These test cases were executed using various configurations including single-node, multi-node, and multi-node with clusters of application servers managed under IBM's Network Deployment application. The test cases exercised various technologies including WebSphere Application Server (4.0.4 and 5.0), MQSeries, various web servers (including IBM HTTP Server, Apache, Apache EAPI, Domino, IPlanet) and several databases (including DB2, Oracle, and Informix).
- Identified and opened defects against WebSphere, IBM HTTP Server, MQSeries and Domino.

Business Systems Analyst / Programmer, Contractor

TES Employment Inc., Raleigh, NC

5/01 to 11/01

Client: Litton PRC, Northrop Grumman, United States Post Office

Java, JDBC, JavaBeans, Java RMI, Java Comm API, Swing, C++, Visual C++, XML, Visual Basic, SQL, MS Access, TOAD

- Led the technical design, implementation and testing of the Java portion of a distributed proof of concept application known as ATLAS for the United States Postal Service.
- Joined a team during the design phase that had already committed itself to developing the workstation portion of ATLAS partially in Java and partially in Visual Basic due to time constraints and a shortage of Java developers. I ultimately led the team to a successful, full implementation in Java / C++ using free open source software where applicable, running on Linux for increased reliability.
- Led the design and implementation of the ATLAS Facility Server, an application server (running on Windows 2000, using Oracle as the back end and JServ as the servlet engine) that provides the Tray Label Collectors (TLCs) in a mail processing facility with sort plan data. The facility server also manages tracking data originating from the TLC and uploads it to the ATLAS national server.

- Designed and wrote servlets to handle communication between the TLCs and the facility server, including the uploading of large amounts of transaction data as compressed XML files by the TLC for inserting into an Oracle DB on the server.
- Pioneered the design and development of a reusable, distributed hierarchical configuration system. Coded almost all of the necessary components of this system, including a Java Swing GUI for administration, Oracle stored procedures, servlets, XML parsers and a Java RMI server.
- Created a clean, event-driven, multi-threaded, object-oriented design for signaling GUI updates, greatly improving the Java GUI's responsiveness as compared to the VB GUI. (Multi-threaded programming is not simple in Visual Basic.)
- Designed and implemented a barcode scanner driver in C++.
- Designed and implemented an efficient, extensible, multi-threaded, object-oriented printer driver in Java for thermal barcode printers used by the USPS that runs in the same JVM as the TLC application and uses the Java Comm API.
- Designed the TLC's Listener, which is responsible for parsing incoming data off the serial ports. The Listener spawns new listener threads for each serial port to handle print requests originating from Mail Processing Equipment (MPE), parses the data and passes it along to the Event Manager. The Listener can be easily extended to support various types of MPE.
- Designed the TLC's Event Manager, which handles all communication between the facility server, listener, print driver, and GUI. Some of this communication involved posting to servlets on the facility server while some involved the use of Java RMI.
- Wrote most of the Java RMI code facilitating communication between the TLC and facility server.
- Wrote the configuration and sortplan XML parsers in C (using the free libxml2 for Linux) due to the performance requirements.
- Implemented most of the Event Manager-related functionality.
- Designed and wrote code using JDBC for accessing the databases where applicable.

Software Developer, Contractor

CNC Global, Raleigh, NC

4/00 to 11/00 and 12/00 to 3/01

Client: Tivoli / IBM, RTP, NC

Java, XML, Visual Age for Java

- Developed authorization code as part of the security team for a distributed operating system written in 99.9% Java.
- Participated in the implementation and testing phases of development.
- Took over ownership of, designed and developed new features for the distributed security cache and the security directory service code for the distributed OS.
- Found, debugged and tested fixes for many security-related defects.
- Developed an innovative way to generate test cases for testing the security authorization APIs. I created a test tool in Java/XML/Jef and used it to generate hundreds of test case variations. These generated test cases were run regularly against new builds of the distributed OS as they became available. Use of this tool achieved far greater coverage than would have otherwise been realized with manually written test cases. Once available, the tool generated hundreds of test cases quickly and easily. This tool provided great coverage for the security API test effort.

Corporate Research and Development Team Member

Intelligent Information Systems, Inc., Durham, NC

9/99 to 4/00

Java, JSP, JDBC, JavaBeans, Java RMI, XML, Visual Basic (including add-ins and ActiveX controls), UML, SQL, PL/SQL, HTML, WebSphere Application Server V2, Rational Rose, Oracle, MS Access, TOAD

- Specially selected by the company president to participate in IIS' Corporate R&D Team, which was formed to creatively streamline the conversion of large legacy applications to newer technologies. Duties included mastering new and old technologies, obtaining certifications, formulating new methodologies and creating application frameworks that support them, and developing new tools. Gained experience on internal projects using technologies like Java, servlets, JSP, WebSphere Application Server, JavaBeans, Rational Rose.
- Played a lead role in designing, implementing and testing WebPET, the Web Productivity Enhancement Tool. WebPET is a repository for internally developed tools that are made available for use by employees via WebPET's web interface. All of the tools contained in the WebPET repository are run on the server, eliminating the need for the installation and maintenance of these tools on each developer's machine. WebPET's servlets and JSPs, running on IBM's WebSphere Application Server, provide dynamically generated HTML forms to WebPET users who wish to use a specific tool in its repository. These forms prompt for the parameters required to use that tool. Each tool and its parameters are described in an associated XML document. I designed much of WebPET using UML and Rational Rose.
- Played a lead role in designing and implementing BugTracker, a defect tracking system written mostly in JAVA for the web.

Technical Staff Member

Intelligent Information Systems, Inc., Durham, NC

1/98 to 11/99

Visual Basic (including add-ins and ActiveX controls), SQL, PL/SQL, Oracle, MS Access, Cognos Powerhouse, TOAD

- Played a lead role in creating and executing a methodology for converting a legacy Cognos Powerhouse client/server application to Visual Basic. The customer was a Wisconsin-based insurance company. Their application consisted of several hundred screens, reports and programs.
- Participated in all phases of development for the legacy conversion project.
- Due to the innovation demonstrated in the methodology and toolbuilding described below, the project was successfully completed under budget, about six months ahead of schedule and with about half of the originally projected manhours. The team also included many last minute enhancements that were not part of the original project plan.
- Invented SLIC - the Screen Layout Item Constructor VB add-in within my first week of programming in Visual Basic. SLIC automates the process of converting legacy application screens to VB forms and saves from 2-30 hours of work on each screen that it generates, with greater time savings realized on more complex screens. SLIC eliminated many hundreds of hours of tedious work on the legacy conversion project.

- Independently created SLAC - the Screen Layout Auto Coder VB add-in, which helps automate tedious coding tasks using user-defined templates. SLIC and SLAC together generated approximately 90% of all the VB application code for the legacy conversion project, thereby greatly increasing my teams' productivity and reducing costs for the client.
- Developed user controls in VB and incorporated them into the SLIC/SLAC methodology, which was the methodology developed for the legacy conversion project described above.
- Created a well-designed VB application framework that supports the SLIC/SLAC methodology.
- At the owner's request, periodically demonstrated SLIC and SLAC to potential clients to emphasize the technical ingenuity of IIS employees.
- Participated in IIS' recruiting effort by giving numerous project demos to potential employees.

Software Engineering Intern

Intelligent Information Systems, Inc., Durham, NC

Full time, Summer 1997

Oracle Developer 2000, SQL, PL/SQL, Oracle, TOAD

- Created the carrier subsystem for a workers compensation software package used by several state worker's compensation bureaus. This subsystem consists of Oracle forms developed using Developer 2000 and associated PL/SQL stored procedures.

Education:

North Carolina State University, Raleigh, NC

B.S. Computer Science, Dec. 1997

GPA: Major: 3.84 / Overall: 3.777

Summa Cum Laude

Dean's List

Virginia Tech, Blacksburg, VA

B.A. Communications, May 1993

Minor: Political Science

References:

Available upon request.