Alan Prosser

Senior Software Engineer/ Technical Lead/ Senior Systems Analyst/ Full Stack Developer

Summary of Qualifications

Trained as systems/scientific developer. Worked in many Software Life Cycles. Agile environments the past few years. From Aerospace to consumer products to low level server performance monitoring and financial services. Many Operating systems and languages. Persistent problem solver. Commonly assigned to learn new technologies and then mentor others. Work best in cooperative team environment. More than 2 dozen languages, working most recently with Java and groovy and numerous frameworks for front and back end applications and micro services handling web pages, customer service, communication with credit unions. Previous job used C/C++ on Unix variants and Windows. RDBMS SQL Oracle and PostgreSQL with some MySQL and SQL Server. Worked in Virtual environments and Researching Cloud computing.

Employment History

Iowa Student Loan 05/2016 to Present

Project Type: Taking applications for student loans over the internet and supporting applications.
Role: Senior Software Developer
Responsibilities: Develop and maintain ISL application to take applications for student loans.
Help split off parts into microservices creating REST APIs to be used to communicate with other microservices.
Used Java 8 (Amazon Corretto), groovy, Apache Tomcat, Spring-boot, Spring Framework, Hibernate, SQL, SQL Server, ActiveMQ, Javascript, HTML, XML, Json, Git, nodejs, maven, numerous other Open Source frameworks. Testing was done using junit, mockito, Spock, Fitnesse and Cypress. Used pair programming and Test Driven Development. Jira was used for project tracking.
Highlights:
- When the front end of the old application was to be created with micro-services using spring-boot, I helped the Business Analyst (BA) identify what fields needed to be included in the new API and how they were mapped to the database..
- When we split communication with the Credit Bureau to its own micro-service, I researched the interface to the credit bureau and showed that updating to their newer XML API interface would save money on cleaning up mailing addresses.
- I created several REST endpoints for services to communicate with each other.
- When we were getting ready to turn off the old front end, there were many hundreds of test cases written in Fitnesse. Instead of turning it off and seeing what would break, I devised a way to audit the old test cases, divide them into sets that could be updated in manageable chunks, and track the updates so that the production code and build would not break while rewriting the tests.

- After the old front end was decommissioned, I swithced teams to work on security. They had an open source application called Keycloak to help with single sign-on and multi-factor validation. There was not much documentation but I helped figure out how to override classes and templates to meet business requirements for 3 factor validation when an access code was emailed to the user to use when logging on. This application used node.js and tests were in Cypress and Spock.

TeamQuest, Remote to Clear Lake Iowa 04/2012 to 04/2016

Project Type: Capacity Planning and Server performance monitoring software.

Role: Software Engineer V

Responsibilities: Develop and support TeamQuest server monitoring agents, develop and maintain the database APIs between TeamQuest software and Oracle and PostgreSQL databases.

Research new technologies and plan how to incorporate or support them with TeamQuest software. Code written in C++ running on Windows and several Unix/Linux platforms. Scaled Agile Framework methodology and continuous development and integration using Jenkins. Used some message passing rabbitMQ. Provided feedback to management on planning.

Highlights:
- When they were planning to add support for PostgreSQL databases I learned how to use it, helped modify our build of PostgreSQL, figured out how to call the native API from C++.
- Wrote a paper for internal use to compare PL/SQL used by Oracle and PL/pgSQL used by PostgreSQL for writing stored procedures and triggers. Wrote trigger generators in both languages to allow API to use database views.
- Worked with clients to set up management of very large databases to aggregate data from thousands of servers, or to help transfer from Oracle to PostgreSQL.
- Research on Cloud and NoSQL technologies such as AWS, OpenStack and Mongodb to see how their products may be affected and how they could be integrated to new environments.

Vision-Tech Consulting, 09/2010 to 04/2012

Project Type: Capacity Planning and Server performance monitoring software.

Role: Consultant

Responsibilities: Research and make enhancements to TeamQuest software for multiple platforms.

Highlights:
- Figured out how to monitor zone (Virtual Machine) information in Sun Solaris OS.
- I became their first partly remote developer.
- I switched to their Database team.
- They created a position for me fully remote.

EDS/HP Program Office, 04/06 to 06/09 (Note: HP purchased EDS)

Project Type: Program Office support and Process Improvement.

Role: Software Metrics Subject Matter Expert

Responsibilities: Working for corporate headquarters, support and mentor PMs and PM SMEs with Software metrics tasks. (Train Project Managers in aspects of estimating large projects). Provide expertise to improve Software Development Processes.

EDS BPAD Consumer Direct, Des Moines, IA 06/98 to 03/06

Project Type: Application development for Consumer Products fulfillment. Some warehouse and customer service applications.

Roles: Information Analyst/Specialist. Also Configuration Management subject matter expert and PM.

Responsibilities: Support several cross platform applications using Java, Oracle, Unix, VB, Windows, CICS, IMS, and mainframe (PL/I). Support back end server side Java (J2EE).

Highlights:
- For Y2K, worked on core team and developed a way to modify sets of files and databases to simulate operating at key dates and times. This saved many thousands of dollars over buying a solution.
- Became a Project Manager for some projects, including one that researched long running processes for performance improvements, saving several $100K in internal costs.
- Served as PM for a Disaster Recovery drill.
- Served as CM SME for high level organization full time for a while then part time while they went through bringing the organization to common process standards at CMMI Level 3.
- Trained as a Java developer to work on J2EE and Oracle for middleware and internal Customer Service applications using Websphere.
- Wrote project designs to translate loose business requirements into technical information usable by developers with estimates.
- Learned Apache Struts and the EDS extension called Reusability Component Framework, then wrote up an outline for the developers to use to rewrite JSP applications that took many weeks to build into struts in a couple days.
- Helped write stored procedures and triggers in PL/SQL for the Oracle Dbas as needed to allow programs to access views instead of needing to know all database internals.

Enterprise Systems Associates, Overland Pk, KS (Des Moines) 11/97-5/98

Project Type: Application development.

Role: Consultant.

Responsibilities: Support legacy order processing system for EDS in Des Moines as a Contract to Hire.

NASA Space Shuttle Software, Houston, Texas, 01/86 to 10/97 (IBM Federal Systems, LORAL, Lockheed Martin)

Project Type: Development of software to fly the Space Shuttle.

Roles: Many, from Sr Associate Programmer to Sr Engineering Systems Analyst, some time as independent Requirements Analyst and independent verifier/tester all in CMM Level 5 Environment

Responsibilities: Help build the development environment for the Space Shuttle. Created tools to automate processes to improve quality and productivity.

Highlights:

- Write processes and procedures for Shuttle Software development after Challenger incident.
- Supervised a subcontractor for some of the test simulators.
- Maintained tools that take information about Space Shuttle Payloads from a database and then write code that gets compiled into the software that controls the Space Shuttle in flight. Another tool would test that the code created worked properly.
- Developed class for the ISPF (green screen) technology and taught to newer programmers for interfacing with screens and generating JCL.
- Automated the build process that went from a week and a half with a senior programmer to a couple days monitored by a high school graduate. I was going to be lead on that but ended up doing all the programming.
- Worked as developer on some applications and Requirements Analyst and QA on others. Served on multiple Configuration control boards for tracking changes to software and processes and defects. This organization was one of the first to be assessed as Level 5 using Capability Maturity Model from the Software Engineering Institute at Carnegie Mellon.
- Worked on many special projects such as: learning Ada and comparing a tool rewritten in Ada vs buying a tool that would supposedly write code from requirements, learn to use an expert system to validate requirements as a backup since I knew Lisp.
- I became the RA for the special "link" program for the Space Shuttle that was one of the applications that they decided to rewrite from assembler to C++. They did not have the standard library yet, so wrote their own. I developed testing methodology for class library in C++, essentially writing unit tests for all methods.

Certifications and Expertise

Technical Expertise: (HW, SW, Apps, OS, etc)

Support applications written in Java/ J2EE: 8 years

Use of modern frameworks using their APIs : Spring, Hibernate, Spring-boot, SQL Server, REST, Groovy, Thyme-Leaf, etc. 4 years.

Application Development Object Oriented C++ and C : 9 years

Application Development interfacing with Oracle and PostgreSQL RDBMS: 9 years

Application Development cross platform (Windows, linux, Solaris, other Unix): 10 years

Specialized independent testing incl Y2K and Disaster Recovery: 6 years

Learning new technologies: 30+ years (more than 30 languages)

Project Expertise: (Process Improvement, Change Mgmt, etc.)

Many years in High maturity process environment and recently in Agile methodology including a couple years with Scaled Agile Framework.

Process Improvement, Configuration/Change Management: 20+ years

Process Improvement Metrics (High Maturity NASA / EDS): 5 years/ 3 years

Requirements Analysis (formal, separate from Developer duties): 6 years

Project Management: About 1 year as PM, > 3 years coaching PMs.

Industry Expertise:

Financial Services: 4 years

Server Performance Monitoring Software: 5 years

Consumer Industries and Retail: 9 years

Manufacturing, Financial Services: 4 years

Government/Aerospace (NASA): 13 years

Education

BS in CoSci with minor in Math, cum laude, U of Houston, Tx. Systems and scientific programming.

Contact and References

Alan Prosser – Phone (515)577-3304 email alprosser19@gmail.com

More references available on request.