Katherine Stone

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Profile

I have 20 years of software development experience primarily in the Java ecosystem. In the last 3 years I have developed a keen interest in Front-end development. Currently I am enrolled in a Frontend Development bootcamp and would love to shift my attention there using React, Vue.js or Angular. I believe this would blend my love of development with my interest in artistic pursuits perfectly. At the same time, I am happy to develop on the full stack which would leverage my experience.

Throughout my career, I've developed and maintained numerous successful web applications. I have experience with all facets of the software development life cycle including requirements gathering, system design, implementation, CI/CD, deployment, testing, maintenance, and framework upgrades.

In the last 9 years at GDIT/CSRA/SRA my focus has been on developing Enterprise Applications which track compliance with various Environmental Regulations for the U.S. EPA, the Western Climate Initiative and the Government of Australia's Cap and Trade program. These applications have used Groovy, Grails, Spring, Spring Boot, Java and most recently various JavaScript frameworks. For the last decade I have been working in Agile teams most recently using the SAFe Agile methodology.

As a developer I value writing code with extensive test coverage and pursuing relentless improvement while developing. I particularly enjoy communicating technical issues in a way that everyone can understand. I take pride in properly analyzing and understanding the problem presented by a project's sponsors and enjoy working together to create appropriate and user friendly solutions. One of the things I consistently have enjoyed, regardless of technology, is modeling the objects in a system based on requirements and wiring up the service and data access layers. I have taken a lead in upgrading and modernizing many applications I have worked on. I have upgraded applications all the way from Grails 1 to Grails 4. My approach is to learn all I can about the area I am working with in an application whether it's REST best practices, Vuetify components, or Grails and SpringBoot conventions. I then apply this to the codebase and communicate it to my teammates, perhaps via a brown bag presentation or just a quick code review. I am not afraid to ask questions and have historically been involved in several technology communities which provides another knowledge base to use when needed. I value the benefits of Pair Programming and have several years of experience working remotely. I have worked in teams where fast delivery was a must.

Self-Motivated, Easy to Work With, and Team Oriented. Bridge builder.

Technical Summary

Interests: Vue, React, Angular, Node.js, CSS, Accessibility, Spring Boot
Languages : JavaScript, Groovy, Java, SQL, PL/SQL
Presentation: HTML, CSS, Vuetify, Bootstrap, GSP, JSP w/ JSTL, jQuery, Velocity, AJAX, FOP
Frameworks: Vue.js, Knockout, Angular, Spring Boot, Grails, Spring Framework, Struts, Hibernate
Databases : Oracle, PostgreSQL, MySQL, SQL Server, and DB2
Other: Git, Jenkins, Vagrant, Docker, AWS, VSCode, IntelliJ, Maven, Gradle, Tomcat, JUnit, Spock, Geb, Cucumber, Jasmine, Quartz, Accessibility, OWASP

Work Experience

Software Developer, GDIT, Durham, NC Jan 2017 – Present

Since 2018, I have been working for the Office of Transportation and Air Quality at the EPA. I have been serving as one of the technical leads for our team which rebuilt the Registration process for various programs including the registration of Fuels and Fuel Additives.

- OTAQREG is a Java Spring application backed by an Oracle Database. It collects various company and fuel registrations for the EPA which allows the users to meet their compliance goals. The application implements RESTful services using Spring MVC and implements a SOAP client submodule for interacting with various other EPA services. Our team was tasked with completing unfinished development of the application which was initiated at another company. The OTAQREG frontend used Knockout JS and an older MVC framework, Stripes, in conjunction with some Spring Framework functionality. I analyzed the application and led an effort to determine the strategy for modernizing the application. We have started rewriting the application frontend using Angular within a micro front-end approach which allows for gradual conversion. We removed Stripes and are fully leveraging Spring. I identified a lack of test coverage and mentored teammates on different types of tests to write for different layers of the application including JUnit, Mockito, and Jasmine. Since completing that goal, we have been building new RESTful services needed by the EPA team. New service functionality was built using SpringBoot applications interfacing with new and existing databases. I also was heavily involved in upgrading an older Grails application in the portfolio from Grails 2 to the most recent version of Grails (4 at the time).

From 2017 -1018 I served as a Grails developer working on the Western Climate Initiative's Compliance Instrument Tracking System Service (CITSS).

- CITSS is the management and tracking system for the Western Climate Initiative's cap-and-trade programs. The application is written using the Grails 4/Spring Boot framework and interfaces with a MySQL database.
- Joined CITSS and immediately helped upgrade the application to the new Grails 3 framework which was a total framework rewrite and is backed by Spring Boot technologies. I proactively communicated with the Grails team and Grails community when needed throughout the upgrade.
- Implemented new functional requirements and automated test coverage for CITSS by independently and pair programming with teammates.
- Developed DevOps capabilities through monitoring application health and pairing on hosting-related tasks.
- Involved in moving the application to a more integrated and modern security solution using Spring Security for both REST and Web Application Authentication.

Software Developer, Eastern Research Group, Morrisville, NC Sep 2016 – Jan 2017

- Emissions Reporting Tool - Lead effort to rewrite an Access based solution for the EPA using Grails 3, Flyway and MySql. Worked with frontend developers to integrate Grails with Backbone front end. The web application used REST to communicate between the single page application (SPA) Backbone JS frontend and the Grails 3 backend. Implemented an agile process for our distributed team.

Software Developer, SRA International, Charlottesville, VA April 2012 -Sep 2016

- Australian National Registry of Emissions Units - The ANREU is a national registry to account for carbon units. Tracking these units is required for compliance under the Kyoto protocol and under Australian domestic climate programs. The application is written using the Grails framework, using the Groovy language, and interfaces with a SQL Server database. As a developer, I was responsible for writing code, pair programming, writing tests, and jointly architecting new solutions. I was also responsible, along with the other team members, for maintaining our development environments on AWS and helping with deployment to the production environments.The application has extensive test coverage including unit, integration and functional automated tests. As an agile team member, I participated in daily stand-ups, bi-weekly sprint planning and retroactive reviews of team activity.

Programmer/Analyst, Austin Independent School District, Austin, TX November 2007 – April 2012

Web applications developer at school district serving approximately 86,000 students at 124 schools. Job responsibilities included gathering and implementing requirements, testing systems and maintaining legacy web applications. Using primarily Spring, Struts, Hibernate/JDBC with Oracle 10G. These systems include:

- Instructional Planning Guide – Worked directly with stakeholders to design and build a system, with the goal of helping teachers maintain their curriculum goals and lesson plans in a web based application. This allowed users to abandon the traditional workflow of writing and sharing lesson plans via Word documents. Opened new avenues of lesson collaboration between teachers, allowing new teachers to adopt parts of published and proven teaching plans. Provided administrators with the ability to promote state and federal targets using lesson templates and, for the first time, being able to reliably tie district specific goals to these targets. Implemented the initial roll out in less than 3 months with minimal faults. The application was built using Spring (including JDBC Templates) and Hibernate. The view layer leverages JSP/JSTL, Ajax(DWR), and FCKEditor to build rich but sensible web forms. Almost all completed forms and reports are viewable as PDFs using FOP and Velocity. Responsible for choosing the technology stack to use, setting up the project and mentoring my co-developer who was experienced in Java but new to MVC and web development.

- PRA – Inherited this application to maintain and implement new requirements. PRA allows teachers to enter primary reading assessment scores and thereby monitor a student's development and needs. Worked to implement significant application changes due to new test standards in a very tight time frame. The rules of test administration are complex and historically have proved difficult for teachers to follow consistently. In addition to the Spring/JDBC technology stack, PRA also relies heavily on JavaScript to validate these rules on the client side.

- AISD Instructional Management System- Responsible for maintenance of this system. It is the main system used by teachers and administrators to enter test data and track student and teacher performance. Also built using Spring, JDBC, and Ajax, with Oracle 10G as the database. Integrates data from many backing databases, including a vendor's student information system. This tool together with PRA saves the district over $100,000 in yearly software purchase costs and accommodates the unique requirements of the District, which are not available in any commercially available education product. Additionally the data, along with PRA data, is exported to the state and various funding entities in order to qualify for sizable grants that the district depends on.

- e504 Application- An application that allows for entry and tracking of students qualifying for accommodations in the classroom according to Federal and State legislation. The application allows for entry and tracking of special accommodations for each qualifying student. Enables teachers, administrators, and the transportation department to be notified of new accommodations needed in a timely fashion and thereby ensuring the success of students with disabilities and health issues. The application is critical to the district as failure to comply with Section 504 could result in loss of federal funding for the school system. The application is written using Struts, Java2Sql, JSP/JSTL, Velocity/FOP, and is backed by Oracle 10G.

- Mentored teammates on using source control, afterwards 100% of team was successfully using CVS.

- In the 2010-11 school year, AISD switched student information databases. Team was initially given 18 months as an initial estimate to plan for application migration. Due to vendor contract negotiations, actual time given was 3 months. Worked with other programmers to quickly create and share database views to the new system. Team was successful in converting all applications to the new system. This included re-factoring application queries and testing all of the flows and performance using JUnit and JMeter.

- SEEDS Backup – Summer of 2010-11 served as interim developer for the main Special Education application written in PERL and JAVA (some modules using Struts and Spring Web Flow) . This is a mission critical and time sensitive application serving about 10% of the student population daily.

Software Development Manager, Texas Department of Housing and Community Affairs, Austin, TX April 2004 – November 2007

2006-2007 as Manager

- Served as Technical Lead for a group of 7 developers. Included planning and coordinating work for all in-house software development projects as well as maintenance work.
- Champion for increasing teammate interaction via pair programming, design reviews, code reviews, and the functional testing of each other's code.
- Worked with project managers and the State Information Department's (DIR) new directives to develop a standard software development methodology for use in our internal projects.
- Coordinated training for team members and conducted several in-house trainings on our MVC framework.
- Managed all releases including frequent maintenance releases.
- Led three major in-house projects through the SDLC, including planning and analysis, requirements gathering, design, implementation, testing, deployment and maintenance.

2004-2005 as Java Developer

- Developed new Web application modules for Federal and State Housing Initiatives, Disaster Relief, and Community Resource Programs. The requirements to delivery cycle was often very short in order to meet state and federal directives. These applications included the Housing Contract Management System and Compliance Monitoring and Tracking System. The technologies included Maverick (MVC framework), Velocity and Torque deploying to Tomcat backed by Oracle 9i.
- Built and maintained Ant build scripts and served as team lead for CVS source control repository.
- Documented the team's technology toolbox and helped mentor team members on use of the MVC based framework and other tools.
- Created and Tuned Views, Triggers and PL/SQL functions in the database.
- Lead System Requirements process for new application module.

Senior Software Engineer**, e-Marketing Team, **Oracle Corporation, Redwood Shores, CA Oct 2000 – Oct 2003

- Built J2EE compliant applications that focused on integrating Marketing and Sales Business data. One example was a Marketing Intelligence dashboard for executives to view including the CEO.
- Developed personalized portlets for the Oracle Portal showcase, my.oracle.com, primarily using Java. Team was often the first users to implement and promote new features developed by the

Portal team. Worked with team to come up with fun and useful examples of the Oracle Portal product. Served as admin of my.oracle.com content using XML based configuration. Also involved in QA and support of site including training a support team.

- Built Salestools application using an in house MVC framework (UIX). Application used marketing data to generate leads for Sales.

- Maintenance and QA of legacy Java applications and fixing bugs.

- Administered software source control for team and experience working with systems admin to deploy J2EE applications to Production and help maintain our own development environment.

Java Developer, Reynolds Metals Company, Richmond, VA 1999-Oct 2000

- Began development career with opportunity to rewrite mainframe client/server data input screens by creating new web forms using Java (Servlet and JSP) with the help of Netbeans IDE, and deploying with WebSphere on IBM AS/400. DB2 was the backing Database.

Education

Virginia Commonwealth University, Richmond, VA 1999-2000 Post Baccalaureate Certificate in Business Information Systems.

University of Virginia, Charlottesville, VA 1991-1995 B.A. History and Fine Arts

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