**Dan Liu**

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An accomplished senior technical lead/developer specializing in Java enterprise application analysis, design and implementation, with extensive experience in the full life cycle of application development.

**PROFILE**

* Over eighteen years of hands on and leadership experience in Java application development and design.
* Expertise of lightweight multi-tier web application, Restful web service using open source technologies.
* Proficient in diverse database platforms including Oracle, Postgres and DynamoDB.
* Possess the initiative and ability to work independently with minimal direction.
* Exceptional work ethic, strong analytical, troubleshooting, mentoring and organizational skills.
* Strong communicator and team leader with interest to learn and incorporate new technologies.

**SKILLS**

Languages Java, Kotlin, C#, PL/SQL

AWS SNS/SQS, EB Web Tier/Worker Tier, ECS, ECR, DynamoDB, Secret Manager

Web Development Angular, JQuery, Ajax, JSON, Restful WS, SOAP, Bootstrap, CSS, XML, XSLT

Application Server Tomcat, TCServer, WebLogic, JBoss

Frameworks Spring, SpringBoot, Spring Integration, Docker, JPA, Hibernate, EclipseLink, EJB3, Quartz, Activiti, Drools, ASP.Net, JUnit, Mockito, Maven, Gradle

Database Oracle, Postgres, DynamoDB, MySQL, SQL Server

Tools Intellij, Eclipse, GIT, SVN, Rational Rose, ClearCase, ClearQuest, Doors, ALM, UFT

Operating Systems Windows, Unix, Linux

**EXPERIENCE**

**Fannie Mae**

**Senior Tech Lead / Software Developer**

Single-Family Customer Engagement Technology (SFCET)  **2016 - present**

**LDNG (Loan Delivery Next Generation)**

Large scale enterprise wen application through which lenders submit loans to Fannie Mae for Whole loan sale and MBS Pools. The application uses Spring, SpringBoot, Spring Integration, ESB, Angular, Oracle XML DB, AWS EB, S3, SNS/SQS, ECS, ECR, DynamoDB, Secret Manager

* Lead the ongoing on prem BRO application migration to AWS2.0. Design and implement the application to use SNS/SQS as messaging communication. The application is containerized using Docker and deployed to AWS ECS through Fargate.
* Design and implement the out of band monitor system to support automate system retry along with comprehensive email notification using AWS EB and DynamoDB
* Design and implement various features in LDNG UI, TS, EU, ES, Wire Service, LDP, LEO, Reference Data, Adapter, Data Service, BRO components using Angular, Restful web service, ESB messaging
* Ported EB Web Tier Adaptor component to EB worker tier. Leverage worker tier to support scheduled job for targeted funding loans.
* Proficient in Angular development. Lead the loan detail Backbone to Angular conversion effort. Constantly guiding the team to find better solutions.
* Lead the major Spring 3.x to Spring 5.x upgrade. Addressed many critical CLM findings.
* Implement the PING ROPC (application to application) integration for Wire Micro Service component.
* Led UI development for eClosing DLT Blockchain POV project. With newly learned DLT skills, put long hours to get all features done and done right that the project received amazing feedback from our customer partners and executives.
* Improve engineering capabilities and overall team’s software development by adopting TDD, BDD, test automation and pair programming. Bring junior developers up to speed with the technology platform
* Perform requirement analysis, architecture design and technical assessments.
* Provide L3 production and release support. Troubleshot and resolve issues in Perf, CLVE and Prod environment. Lead and participate multiple EBF to ensure the both Functional and Non-Functional requirements are meet in a timely manner.
* Assist with Operational Risk, Compliance, and Audit activities.

**HAMP 2014 – 2016**

* Researched, led and engaged the new technologies using Activiti (workflow engine) and AngularJS for the DBMod application that provides a framework for DBMods execution with process management capabilities.
* Researched and gained in depth understanding of EPV (Enterprise Password Vault) integration. Led the development effort to deploy various IR2 components to EPV enabled environments.
* Led the effort to migrate and deploy IR2 UI application to JBOSS application server. Rapidly made comprehensive code changes to deliver the result in a short timeframe.
* Provided technical support and troubleshot various production issues.

**Freddie Mac**

**Senior Software Consultant**

**MSS** (Multifamily Securitization System) **2013 – 2014**

Java enterprise application provides system integration, reporting and web front to support multifamily core pricing and securitization activities. The application uses Richfaces 4, JPA/EclipseLink, Oracle SOA Suite, SQL Server, Sybase.

* Designed and implemented robust bulk updating for financial statement data with configurable transaction boundary and self-quarantine capability.
* Designed and implemented query tool to allow user defined query logic for pipeline management data.
* Identified and improved the web user interface performance. Troubleshoot JPA persistent/caching issues. Provided technical guidance for junior developers.
* Performed technical assessments and rapid prototyping for user requirements.

**Fannie Mae**

**Senior Software Developer 2010 –2013**

Designed, developed, and updated applications used by business and operation units to automate business processes. Led the development following best practice for lightweight web applications. Rapid prototyping for proof of concept, researching and incorporating new technologies. Mentored less experienced developers and provided technical guidance.

**TOPS** (Technology Operations Production Support)

Web application provides system monitoring, reporting, querying, scheduling capabilities. The application uses Richfaces, Spring, Hibernate, CSS, Quartz, Oracle.

* Performed requirement analysis, architecture design and technical assessments.
* Designed and implemented the web application and standalone scheduler to support job scheduling, job on-demand request and job approval.
* Provided the scheduling capabilities based on process windows and business logical days.
* Designed and implemented the Autosys job monitoring functionalities that supports nested job definition with custom tree table. Job running statistics were collected and email notifications were sent for long running jobs and failure jobs.
* Triaged production support issues and provide guidance and help for end users.

**MCM** (Managed Communication Module)

The application supports the managed email communication for different business groups through email templating, email approval process. The application helps the business operation teams to reduce the operational incidences. The application uses Richfaces, Spring, iBatis, CSS, Oracle.

* Designed and implemented the web application for email templating, email creation and email token replacement.
* Provided the email locking/unlocking mechanism to enforce that email is modified by a single user in a period of time
* Developed the email approval process based on approval trigger criteria.

**Trident Systems Inc., Fairfax, VA 2001 – 2010**

**Senior Software Engineer/Technical Lead**

Led the application design, development and product deployment. Performed requirement analysis, architecture design and technical assessments. Researched, assessed and incorporated new technologies.

**SHARE** (Software Hardware Asset Reuse Enterprise )

A library of combat system software and related assets/artifacts that facilitate reuses of designs across multiple programs for Navy surface warfare systems (NSWC). This is a rich client, multi-tiered web application using SEAM, Hibernate, Richfaces, Oracle.

* Led the application design, development and product deployment using JBoss SEAM, Hibernate, Richfaces, Facelet, CSS, Ajax, Drools, Birt Reporting, CXF.
* Performed requirement analysis, architecture design and technical assessments.
* Designed database schema, create tables, triggers, integrity constraints.
* Implemented web service client with Navy NESI repository using Apache CXF.

**SOC-R** (Special Operations Craft-Riverine)

Vessel monitoring software system that manages the independent components within the combatant craft. This is a web application using Postgres, Spring, Hibernate, Ajax/JASON, JSF/Servlet/CSS

* Led the design and implementation of the web application to display high velocity real-time data gathered from multiple shock sensors.
* Designed and implemented the database schema, created tables, triggers, integrity constraints, and stored procedures.
* Designed and implemented the functionalities to monitor engine parameters and alarms.

**Interchange**

Web application for sharing and managing engineering tools to allow the integration of tools and processes into a single data repository. This is a 3-tier web application using ADF, Spring, Hibernate, Oracle.

* Designed and implemented impact analysis for Interchange application using Java, PL/SQL and Oracle XSLT transformation, to handle massive amount of input data, provide fast performance and consume less memory.
* Implemented the queue functionality using Oracle Advanced Queuing, Java and PL/SQL.
* Designed and implemented the Interchange web services with user authentication using Axis2 rampart.
* Designed and implemented XVC (XML View Client) application. This is an Eclipse RCP(Rich client platform) based application, utilizing Lucene index engine and y-files graph package, that provides user rich experience to navigate graphs that represents the interchange xml file and manipulate the data.
* Helped troubleshooting XSLT plug-in issues and provide guidance for XSLT plug-in development.

**NSEP** (National Security Education Program)

Web application as an employment resource for Federal government personnel to find qualified award recipients for their respective office. The application uses MySQL, C#, ASP .Net.

* Maintained, updated and optimized the database schema to support application development.
* Maintained and migrated the existing data set to the modified schema.
* Implemented the certificate requests pages, wizard pages using ASP .net and C#.
* Analyzed query plan to optimize the database query through query modifications, indexing.

**EDUCATION**

M.S. Computer Science George Mason University 2002