Hao Liu

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Location: Wilmington, DE 19810, United States

SUMMARY

- Having 10 years' experience in Java/J2EE, involved Business Analysis, Architecture Design, UI/UX, Tests, Development and Production Support of Java based multi-tier distributed applications both front end and back end.
- Master in Microservices and API application with J2EE Technologies and different frameworks.
- Expertise in DevOps works, includes but not limited to CICD pipeline, Automation Test, Security scans & vulnerabilities control, app deployment and Auditing support.
- Experience in Cloud Architecture and Infrastructure such as Amazon Web Service (IaaS) and Pivotal Cloud Foundry (PaaS).
- Experience in many front-end JavaScript frameworks and UI skills.
- Excellent Java development skills using Java, Spring Framework family, Maven, Restful/SOAP API, Cloud, Linux, and EJB.
- Experience in Message Queue with hands on experience in Kafka, IBM MQ, Rabbit MQ and AWS SQS.
- Strong relational database skills in Oracle, MySQL and Amazon RDS, and NoSQL experience in MongoDB, Cassandra, and DynamoDB.
- Expertise in setup and configuration of various web application servers such as JBoss, Web Logic, Tomcat and IBM Web Sphere.
- Experience in Jenkins pipeline and Bamboo with Shell and Groovy scripts.
- Ability to learn quickly in work environment, fluent in communication, productive interpersonal skills with the ability to understand and cooperate with group requirements efficiently.
- Experience with various Software Development Methodologies like SDLC, Agile/Scrum Methodology.

Tools/Technical Skills

Languages	Java, Golang, JavaScript, Node JS, C/C++, Python/Groovy, SQL
Clouds	Amazon Web Services, Pivotal Cloud Foundry
Operating Systems	Linux, UNIX and Windows Server
Web Services	Restful, SOAP, WSDL, JSON, XML, YAML
Web Technologies	React JS, JQuery, JSF, JSP, JSON, Ajax, XML, HTML, CSS
Application Servers	JBoss, Wildfly, Apache Tomcat, WebLogic
Frameworks	Spring, Struts2, Hibernate, EJB, OAuth 2.0, 2-Way SSL
Databases	Oracle 10g/11g, Mongo DB, Cassandra, MySQL, DynamoDB
Project Life Cycle Management	Jenkins CI/CD, Atlassian Bamboo, Splunk Logging, Dynatrace, New Relic, Swagger
DevOps	Kafka, RabbitMQ, DNS Server, F5 Load Balancer, Docker, Kubernetes, Replica
Others	AWS EC2, AWS ECS, AWS S3, AWS Lambda, AWS API Gateway, AWS SQS, AWS SNS, Magnolia CMS, Jackrabbit Repository

Certificate

- **AWS Certified DevOps Engineer – Professional**   Nov, 2020
  Validation Number: LEQ33HQJKJF41WK8
- **AWS Certified Solution Architect – Associate**   Aug, 2019
  Validation Number: VT0JHKQ1E1111DG1

Professional Experience

Automated Clearing House (RBT), Full Stack Engineer

Wilmington, DE   Capital One Financial Co.
Jul. 2020 – till Present

Description:
- Automated Clearing House (ACH) is key feature of bank payment and deposits system. In Retail Bank Technology (RBT), ACH has been rebuilt into an extendable and flexible platform to take care of our client and company's everyday payment transactions. It will be a future system running completely on AWS, and will be a replacement of mainframe system. It's a mile stone of mainframe to the cloud.

Roles & Responsibilities:
- Built and implemented File Control Total (FCT) Automation project independently.
- Built AWS Step Function to orchestrate the Nacha file and Control file arriving process in FCT.
- Built AWS Lambda function with Golang for business logic includes AWS S3 and AWS DynamoDB in FCT.
- Configured CICD pipeline for FCT automation project, and deployed to Production which serving over 250k transaction per file.
- Built and configured message queue system for FCT Automation using AWS SQS and AWS SNS.
- Integrated multiple projects with AWS KMS authentication.
- Implemented Acceptance Test Driven Development (ATDD) suites for FCT Automation.
- Participated in File and Message Queue system implementation for Batch Ingestion (BI) project for Nacha file and transactions processing.
- Participated in Client Registry (CR) and Client Registry Api (CR-Api) project enhancement for better client onboarding and eligibility check service.
- Built and configured Docker containerized applications and deployed to AWS ECS.
- Created Jenkins CI/CD pipeline for easy and rapid deployments.
- Configured Splunk logging and CloudWatch monitoring tools.
- Fixed and maintained applications' long-term security issues and vulnerabilities.

Project Environment:
- Amazon Web Service, Java 1.8, Golang, Maven, Jenkins CI/CD, GitHub, Spring Boot, AWS S3, AWS Lambda, AWS ECS, Docker, AWS Step Function, AWS SQS, AWS SNS, AWS Aurora, AWS DynamoDB, Kafka, Agile Methodology

Rapid Re-Engineering (AWM), Full Stack Engineer

Wilmington, DE   JPMorgan Chase & Co.
Feb. 2020 – Jul. 2022

Description:
- Trade Match, Assets Transfer and Penny Stock Applications are part of Rapid Re-Engineering in Assets & Wealth Management (AWM) ecosystem. Either new feature projects, legacy application re-engineering, enhancement tasks or maintenance jobs will be taking care by feature team from End to End, including but not limited to, architecture design, implementation development cross multiple applications, QA/UAT testing, Automation and Regression tests, release coordination, and production support. Work closely with Business group for rapid agile feature release and application iterations. Work on all involved applications, make internal API Gateway web service call, connect to external web services and data providers, configure authentication and/or SSO, and develop front end, backend and database implementations.

Roles & Responsibilities:
- Built and implemented Message Queue FM3 based structure framework system.
- Created and implemented framework flow for gather content, distribute data, and API calls.
- Designed and created database schema and table structure, including cloud-based Oracle.
- Implemented UI with React JS for Trade Match and Penny Stock application end to end.
- Integrated framework with Chase ADFS OAuth 2 authentication for both consumer and resource provider applications.
- Maintained app to app passwords and tokens life cycles.
- Implemented One-Way and Two-Way SSL authentication for necessary connections.
- Deployed applications to PCF based private Cloud and configured needed services.
- Built and configured Docker containerized applications and deployed to Kubernetes cluster.
- Created Jenkins CI/CD pipeline for easy and rapid deployments.
- Configured Splunk logging and Dynatrace monitoring tools.
- Fixed and maintained applications' long-term security issues and vulnerabilities.

Project Environment:
- Pivotal Cloud Foundry, Java 1.8, React JS, Maven, Jenkins CI/CD, Git/Bitbucket, Spring Boot, Oracle, API Gateway, OAuth 2.0, Agile Methodology

Product Design and Benefit (CCB), Full Stack Engineer

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Wilmington, DE   JPMorgan Chase & Co.
Apr. 2019 – Feb. 2021

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Description:
- Product Design and Benefit (PDnB) in Consumer & Community Banking (CCB) is one of the most important Product Areas in Chase Rewards & Benefits ecosystem. Either new feature projects, enhancement tasks or maintenance jobs which related to Customer Benefits will be taken care by PDnB feature team from End to End, including but not limited to, architecture design, implementation development cross multiple applications, QA/UAT testing, Automation and Regression tests, release coordination, and Production Support. Work closely with Business group for rapid agile feature release and application iterations. Work on all involved applications, make internal API Gateway web service call, connect to external web services and data providers, configure authentication and/or SSO, and develop front end, backend and database implementations.

Roles & Responsibilities:
- Built and implemented Spring Boot application as Micro Services.
- Onboard Micro Services to both internal and external API Gateway.
- Designed and created database schema and table structure, including Oracle, Cassandra and MariaDB.
- Designed and created Apache Avro schema for Kafka events.
- Implemented UI with React JS, JSF and Struts 2 for both new and legacy applications.
- Integrated Micro Services with Chase ADFS OAuth 2 authentication for both consumer and resource provider applications.
- Built QA automation test cases with Selenium and Cucumber frameworks.
- Maintained app to app passwords and tokens life cycles.
- Implemented One-Way and Two-Way SSL authentication for necessary connections.
- Deployed applications to PCF based private Cloud and configured needed services.
- Built and configured Docker containerized applications and deployed to Kubernetes cluster.
- Created Jenkins CI/CD pipeline for easy and rapid deployments.
- Configured Splunk logging and Dynatrace monitoring tools.
- Fixed and maintained applications' long-term security issues and vulnerabilities.

- Build T shape skills in not only Dev role but also QA and BA roles, in a self-organized Agile Scrum team.

Project Environment:
- Pivotal Cloud Foundry, Java 1.8, React JS, Struts 2, Maven, Jenkins CI/CD, Git/Bitbucket, Spring Boot, Restful Web service, Oracle, Cassandra, Kafka, Avro, API Gateway, OAuth 2.0, Docker, Kubernetes, Agile Methodology

Rewards Platform Management (CCB), Full Stack Engineer

Wilmington, DE   JPMorgan Chase & Co.

Oct. 2017 – Mar. 2019

Description:
- Rewards Platform Management (RPM) system in Consumer & Community Banking (CCB), which is a platform for internal Chase business users to manage, maintain and organize Chase reward system. The system provides multi functionalities, including order services, user profile services, storefront services, and rewards services. Implements the application UI for business users to organize items on sale, manage rewards transaction with a high value, manage purged accounts and etc. Application communicates with multi web services, cooperate with multi companies' data and different teams, and work with applications in different security zones. System deployed on cloud to support Chase user everywhere in the word.

Roles & Responsibilities:
- Designed the architecture of RPM application.
- Developed the application both front end and backend, using React JS and Spring Boot.
- Deployed the application to Pivotal Cloud Foundry based private cloud.
- Implemented SOAP web service client and onboard to API Gateway to consume protected data from different providers.
- Implemented OAuth 2.0 authentication to integrate with Chase SSO system, configured user roles and privileges, and implemented authorization with Spring Security.
- Created CI/CD pipelines and Pattern Build with Groovy script Jenkins based internal continues integration and deployment system.
- Migrated and deprecated legacy JSF application to new designed application using React JS, Microservices and latest technologies.
- Resolved all vulnerabilities and security issues from multiple scans and fixed all critical issues and blocks with SonarQube scan and Fortify Scan.
- Built the Unit Test code coverage above 80%.
- Led the team doing T shape Agile sprints with Develop as trunk role.
- Wrote and refined stories for sprint by communicate with Business.
- Participated in Chase standard cycle and off-cycle releases for multiple applications.
- Agile Methodology with two weeks sprint.

Project Environment:
- Pivotal Cloud Foundry, Java 1.8, React JS, Maven, Jenkins CI/CD, Git/Bitbucket, Spring Boot, Restful Web service, Oracle DB, API Gateway, OAuth 2.0, Agile Methodology

Fitch Rating FDR, Software Engineer, Reading, PA   Fitch Ratings Inc.

Aug. 2016 – Oct. 2017

Description:

- Fitch Financial Data Repository (FDR) providing financial statements, templates, reports and services. Build the application with EJB framework, with multi-layer structure. The project involves design and development of business requirement from all different business groups. Implements UI for templates management, and able to handle tones of complicate business auto calculation job and massive workload traffic. Processing JSM messages asynchronized for large and long run financial calculation jobs. And precisely user workflow, role and privilege control between business groups. Professional IT supports for users all around the world.

Roles & Responsibilities:

- Responsible for understanding the requirement.
- Responsible for system analysis, design and development in J2ee using EJB based webservice architecture.
- Involved in various phases of Software Development Life Cycle as requirement gathering, modeling, analysis, architecture design & development and the project developed using Agile Methodologies.
- Created High Level and detail level Design documents for the new functionalities being implemented including Use case Diagram.
- End to end project management, including customization of product based on the customer's requirement, meeting delivery deadlines on development, testing, implementation phases of system and customer relationship consulting.
- Implemented the design patterns like DAO Factory, Singleton, Service Locator and Business Delegate.
- Designing and editing GUI with innovation and creativity with the help of graphs, charts, other diagrams, etc.
- Integrated Dependency Injection among different layers of an application.
- Developed Object Document from Morphia mapping configuration for Mongo DB.
- Using validation framework for server-side validation with NoSQL database.
- Configure and work on Maven dependency, Wildfly modules, server environment, Oracle and Mongo connections and shell scripts.
- Performed coding of Business Layer and DAO layer, Value Objects and wired them using EJB framework.
- Create Oracle Object and Object Array, and corresponding Store Procedures. Perform complicated business logic and store persistence data into Oracle database.
- Involved in Architecture, design and development of UI/UX using Swing and Microsoft Excel Apache POI.
- Design of SOAP web service APIs, WSDL and XML that allow sophisticated, effective and low costed application integrations.
- Developed Session Beans for business logics.
- Developed Message Queue batch and scheduled jobs running periodically.
- Implemented large bulk documents manipulation process in standalone with multi-threading.
- Developed Oracle PL/SQL store procedures.
- Performed unit testing using JUNIT framework and used Test Case for testing Action Classes.
- Monitored the logs using Log4j and fixed the problems and used SVN for version control.
- Used Maven to automate the build and deployment process.
- Involved in research activities for determining frameworks and technologies feasible for the development of application.

Project Environment:

- Amazon Web Service, Java 1.6/1.8, Ant/Maven, WebLogic/Wildfly 10, SVN, Java Swing, Microsoft Excel Plugin, EJB, SOAP, Oracle DB, Web services, Rabbit MQ, Mongo DB, Blueprint, Quality Center.

Fitch GWS 3.0, Java Developer/Production Support, Reading, PA   Fitch Ratings Inc.
<div align="right">**Aug. 2014 – Aug. 2016**</div>

Description:
- GWS 3.0 is web content management environment that centralizes static contents, media assets, also data retrieval from different data sources and update process and keeps the access parity for multiple client applications. It has a centralized environment to retrieve, search, select and enhance the content. Has a loosely coupled architecture with multiple workflow applications. Not only enforces security by editor role configuration and service authorization, normal end user role authentication and authorization, but also maximized the flexibility of website by using template design. Multiply public instance driven by synchronized author instances provides reliable disaster recovery mechanism.

Roles & Responsibilities:
- Gathered requirement information and provided Technical Writing experience to analyze into clear documentation for executive members and staff.
- Participated in the development of a gather content workflow application.
- Knowledgeable in the different financial modeling, financial statement analysis, operations and the guiding compliance and regulations that support finance and/or core rating functions.
- Create, analyze and provide feedback on the project documentations like Business Requirements Documents, Use Cases, Functional and Technical Specifications, etc.
- Involved in Requirements Gathering, support to solutions definition, testing and implementation.
- Involved in project architecture design, and build up project prototype as Magnolia multi-module Maven project. Involved in server configuration includes server load balance, session single sign on and legacy project reuse.
- Set up project loosely coupled layers, include presentation, platform, services and data transfer layer.
- Configured Magnolia CMS project both frontend and backend, create templates definition, sites definition and theme definition as platform. Configured Magnolia rest tools as service provider and consumed by API subproject.
- Created content App with vaadin UI and customized Magnolia modules, enhanced flexibility and functionality of GWS content management system.
- Developed reusable page, component and area templates based on FreeMarker, Java model bean and business layers.
- Created Java ETL project to transfer and reformat normalized data from Oracle to Mongo DB according to business.
- Configured JBoss server for application with customized restful jars and security domains on dev, qa and production, and created build/deploy script for Linux server.
- Involved in design and development of Magnolia user management and end user session management with Signal Sign On (SSO) and OAuth 2.0 authentication.
- Developed Magnolia workspaces by using Oracle 11g as Jackrabbit Repository.
- Worked on agile methodology and expert with scrum processes.

Project Environment:
- Java 1.7/1.8, Magnolia CMS 5.2/5.3, Maven 3.x, JBoss EAP 6.1/Wildfly 10, SVN & Git, Vaadin, JSP, FreeMarker, JQuery & Ajax, Spring, Restful, Web services, Jackrabbit Repo, Oracle DB, Mongo DB, Blueprint, Quality Center, JIRA, Bamboo, Stash.

Fitch Solutions IDS, Java Developer/Java ETL, Reading, PA   Fitch Ratings Inc.

Description:
- IDS is dynamic data calculation center, and provide ability to user to run regular and customized calculation and refine results, server them with periodic feeds. Rendering web services to other team for internal and external calls, and have its own UI design for user and admin controls. Sharing data between different databases and data sources, and rendering in a timely and fast manner for bulk documents query request.

Roles & Responsibilities:
- Involved in design of the web services using EJB and designed the application as per SOA architecture.
- Prepared the sequence diagrams, class diagrams and Technical Design Documents.
- Used WebLogic application server for development and deployment.
- Developed and configured message driven bean to listen to the events and execute the event handlers sequentially.
- Extensively used EJB frame work's dependency injection, and configured the application context file to create the singleton objects and injected with container.
- Experienced working the front-end developer with HTML, JSP, JavaScript, Ajax, JQuery and Servlets.
- Used Oracle Java driver and Mongo Java driver to connect and manage transactions with different databases, performed query and update the database.
- Implemented the Event Handlers module of the application and used Spring Bath process to parse the file content, and store in the staging tables.
- Used DAO modules to interact with the database and extensively used JDBC template to run the store procedures against Oracle.
- Extensively used Factory, DAO, Singleton and VO design patterns.
- Configured Log4j in modules of the application to log debug, error, info message to monitor the application behavior.
- Deployed the application to Dev, QA and Production environments.

Project Environment:
- Java 1.6, EJB, Feed, Maven, JBoss EAP 6.1, Apache 2, SVN, JSP, Html, CSS, JavaScript, JQuery, Ajax, Spring, Spring Batch, Spring Security, SOAP, Web services, Java ETL, PL/SQL, Oracle DB, Mongo DB.

E-Commerce, Java Internship, Edison, NJ   Tekskills, Inc   **Jun. 2013 - Oct. 2013**

- Implement the website in both front and back ends, which structured with MVC framework, involving core Java, Java bean, JSP, JDBC in logic model and HTML, CSS, JavaScript, Ajax in view model; separate the database CRUD to a Data Access Object for connecting different data sources; to enhance the user interface AJAX validation coded in registration, customer profile, login, and payment models; responses time reduced between client and server by optimizing Java codes
- Delivery full duplex communication between applet client and server, realizing users broadcasting their profiles and IP location in the network and receiving notices from others; Multi-Thread, Java Servlet, IO, SQL language and Exception-Oriented programming techniques are used in this project

Environment:
- Java1.5, Oracle10g, Solaris, HTML, CSS, JavaScript, JSP, Servlet, SQL, PL/SQL, Junit4, Apache Tomcat, SVN, Ant, Maven, Eclipse, Oracle SQL Developer

Education

- **Master of Business Administration**   Aug, 2017
  Information Technology, Goldey-Beacom College, DE
- **Master of Science**   May, 2013
  Electrical Engineering, New Jersey Institute of Technology, NJ
- **Bachelor of Engineering**   Jul, 2011
  Electronic Engineering, Guangxi Normal University, Guangxi, China

Resume updated by: Nov, 2022