**CHANGHAN XIE**

**Java Full Stack Developer**

**PROFESSIONAL SUMMARY**

* Skilled **Java Full-Stack Developer** with **8+ years** of professional **IT** experience in analysis, design, development, documentation, implementation, and testing of software in a micro-services architecture.
* Strong Knowledge of Application Development using **Software Development Life Cycle SDLC** and various methodologies including Waterfall, Agile/Scrum
* Extensive programming experience in **Core Java** concepts including **Multi-Threading**, **Exception Handling, Collection API, and Object-Oriented Programming (OOPs) concepts**.
* Expertise in working with various **J2EE** technologies including **Hibernate, Spring MVC Framework, Servlets, JMS, JNDI,** and **JDBC.**
* Strong experience in Spring Frameworks including **Spring MVC, IoC, AOP**, and **Spring JDBC.**
* Extensive involvement in design, implementation, and test services experience in a Micro Service-oriented architecture and have implemented the REST-based Microservices using the **Spring Boot, Spring Data with JPA(Java Persistence API),** and **Hibernates.**
* Knowledge in innovative and effective UI development with **HTML5, CSS3, JSP, and JavaScript.**
* Experience in developing applications **with Spring CORE, IOC, AOP, JDBC,** and **REST.**
* Experience in analysing the performance issues at the database level and the overall system.
* Experience in using build and deploy tools such as **Jenkins, Docker**, and **K8s** for continuous integration and deployment.
* Exposure to a Track record of increasing responsibility in business software design, **Micro-services**, systems analysis/development, and full life-cycle project management.
* Hands-on experience in designing and developing **J2EE-**compliant systems. Using **IDE** tools including **Eclipse, Net Beans, SpringToolSuite4**, and **IntelliJ.**
* Hands-on experience with build and deployment tools including **Ant/Maven**, **unit** and integration testing using **JUnit**
* Exceptional ability to quickly master new concepts and a proactive team player with a good ability to perform at a high level, meet deadlines, and adapt to ever-changing priorities
* Experience in front-end single-page application development using **Angular 8/11/13/14** and **ReactJs.**
* Background knowledge in front-end web development including **HTML 5, CSS 3, Bootstrap 3/4,** and other third-party libraries
* Expert of Windows Communication Foundation(**WCF**) and **SOAP API**
* Solid understanding of Database design, entity-relationship diagrams (ERD), Normalization, creating temporary tables, views, stored procedures, and user-defined functions in relational database systems such as **MS SQL Server** and **MySQL.**
* Expert in Involving daily Scrum meetings, User Story review meetings, Sprint Reviews, and Retrospective meetings as part of **Agile Scrum Methodology.**
* Possess good team management and leadership qualities.
* Experience managing daily communication with offshore development teams.
* Excellent technical, analytical, and problem-solving skills, strict attention to detail, and ability to work independently and in a team environment.

**EDUCATION**

MS in Computer Science

BS in Computers Science

**TECHNICAL SKILLS**

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| **Programming Languages** | Java8, Java, 11, C++, TypeScript |
| **Query Language** | MySQL, T-SQL, Oracle, MongoDB |
| **Distributed Technologies** | J2EE, Servlets, JSP, JDBC, EJB, Java Security, Kafka, Docker, Kubernetes  (k8s) |
| **Backend Frameworks** | Spring MVC, Spring 3.2, SpringBoot, Spring Batch, JPA, Spring JDBC  Template, Hibernate |
| **Web Application/Cloud Servers** | AWS Amplify Services, Google Cloud Platform, Azure |
| **Web Technologies** | REST, SOAP, WCF |
| **IDEs** | Eclipse, SpringToolSuite4, NetBeans, IntelliJ, Visual Studio Code |
| **Build Automation Tools** | Gradle, Maven, Ant |
| **Testing/Logging tools** | JUnit, Mockito, Postman, Log4j, JMeter |
| **Scripting/Markup Languages** | JavaScript, CSS3, HTML5, XML |
| **Frontend Frameworks** | Angular 8/11/13/14, ReactJS |
| **Methodologies** | Agile Scrum, OOPS/OOAD, Design Patterns |
| **Version Control Repository** | GIT, Bitbucket |
| **Bug tracking tool** | JIRA, Rally |
| **Database Management tool** | Hibernate, MS SQL Server, MySQL, Oracle Database, DynamoDB |
| **Operating Systems** | Windows Family, Unix, MacOS |

**PROFESSIONAL EXPERIENCE**

**Paypal, Jersey City, NJ Aug 2022 – Till Date**

**Java Developer**

Implement APIs, unit tests, and functional tests for the Issuance and Tokenization team, which hosts over a hundred Microservices for global credit/debit card issuing and bank connection services. Ramp up services by migrating them from the old platform to the UCP (Unified Commerce Platform) for faster services sandbox-to-production automation

**Responsibilities:**

* Involved in the Design, Development, and Support phases of **Software Development Life Cycle (SDLC).**
* Joined the Paypal Issuance and Tokenization team as a Java Backend developer for the Raptor application and Restful API development
* Performed **Microservices** scheduled maintenance and major version migration
* Extended the Venmo Transaction Service, Union Pay Interface Connection Service, Master Card Connection Service, and other issuance, tokenization, and connection gateway services using Java Spring and some other internal services such as KeyMaker, Issuance Crypto Lego, etc.
* Analyzed, designed, and implemented the new version of Thales10K Hardware Security Module to support the upgraded advice and related backward compatible functionalities, later became the Trusted Commiter of this component
* Implemented the corresponding persistence layer related to relational database query using **MySQL** and **Hibernate ORM**
* Migrated and maintained Kafka cluster from **Java Kafka** producer application
* ensured the code quality by implementing the necessary unit tests and functional tests for all the services I have worked on using **Mokito, PowerMock, TestNG**, and other internal libraries and frameworks
* Deployed the application to my local JBoss server and tested the **Restful API** I have implemented using **Swagger** and **Postman**
* Built the Jenkins **CI/CD pipelines** with **SonarQube** to deploy the application to the product environment starting from running the required checks automatically on different testing stages via the internal tool, the Console
* Deployed the upgraded service to the docker testing environment and performed One Box testing for the production level
* Upgrade the data file migration Application(SPA) to **Angular 15** from **Angular 14** and corresponding feature migration using **Angular 15, Typescript, HTML, CSS**
* Rewrote GUI components and controllers based on the design document using **Angular.**
* Released the upgraded applications to production by deploying the **Jenkins**-generated release manifest to the **Kubernetes** server as a One Box deployment process
* Participated in the on-call life production support for the Issuance and Tokenization team in a rotated role in a designed period
* Monitored and analyzed the life issues from production services using the internal **Splunk** and **Dynatrace**-based monitoring tool, Observability
* Taking advantage of **Agile methodology** and working remotely with daily stand-up meetings, bi-weekly Sprint plan, end of Sprint Demo, and other planned sync-up meetings
* Used **Github** for project version control and holding reference of the release notes to be shared on the confluence page

**Environment:** Java11, J2ee, Spring boot, AWS, JUnit, Git, Jenkins, Kafka, Docker, Kubernetes, Sonar, Splunk, Dynatrace, Mokito, PowerMock, TestNG, Postman, Swagger, MySQL, Hibernate, Angular 15, Html5, Typescript, CSS3, Oracle

**Goldman Sachs, Jersey City, NJ Oct 2020 - Jul 2022**

**Java Full Stack Developer**

Re-factored payment platform application and related services to be a part of the micro-services system with extension and enrichment, providing Restful endpoints to communicate with the front-end single-page application and the other services. Implemented cloud services for internal usage using AWS API Gateway, Lambda, and RDS.

**Responsibilities:**

* Involved in all stages of the **Software development life cycle** including Analysis, development, implementation, testing, and support.
* Utilized Spring boot in web application to handler business logic, whose applications containerized into docker and managed into multiple regional clusters including USA, Canada, and Asia in **Kubernetes** (k8s)
* Web service is built on **J2EE/ Java** technology using XML and JSON format Developed REST-based Controllers to handle the response and requests
* Followed different design patterns like Singleton, Factory Pattern used hibernate for data persistence
* Working experience in **Service Oriented Architecture(SOA)** using Restful Web Service
* Implemented payment transaction-related service by providing restful endpoints
* Enriched the holds and rules for the risk management system that serves the incoming transactions from the payment application
* Implemented reactive dashboard webpage of the single page application using Typescript**, CSS, HTML**, and **Angular 11** with related features such as routing, modules, components, decorators, life cycle hooks, etc.
* Refactored **SQL query** and related DAO layer to fit newly updated and designed **DB2** database table
* Updated docker file to enable the automatic build and deploy docker image of new database
* Followed **Test Driven Development(TDD)** technique as the procedure of the development life cycle, participated in the smoke test, unit test, integration test, and environmental test for developed API and pipeline
* Wrote unit tests with required coverage for each service that I implemented
* Used Jenkins and sonar as the **CI/CD pipeline** that tests and deploys Spring boot platform micro-services
* Experienced in **Jira** source control and **Git** version control tools.
* Supported the cloud service team in establishing the file-processing pipeline system
* Set up the **AWS API Gateway** for API calls and triggered the Lambda function to handle the incoming requests
* Worked on-call support to the payment platform at the production level
* Applied **Apache Kafka** message queue for listening upstream product data information in SFTP (Secure File Transfer Protocol) that updated events, produced data from several services for downstream data pipeline, and stored in **DynamoDB.**
* Upgraded the **DynamoDB** versions for various **Microservices** to support the mandatory service version refresh.
* Implemented various **AWS Lambda** functions for AWS Cloud services that trigger S3 processing file data, **SQS** to send the pipeline message, and mapped corresponding file information into **AWS RDS** using **PostgreSQL**.
* Utilized **AWS CloudWatch** service to track logs and send the alert notification.
* Prioritized multiple backend **Microservices** deployment using CloudFormation service that triggers the build process to create the container with **AWS Fargate** service along with ECS, and then deployed the installed **EC2 instances** with **AWS EBS.**
* Worked with Agile methodology and actively participated in Scrum meetings as a part of **SDLC**, to produce quality deliverables within time.

**Environment:** Java8, SpringBoot, JPA, Angular 11, Typescript, CSS, HTML, DB2, Apache Kafka, Docker, Kubernetes, JUnit, Git, Jenkins, Sonar, AWS (MSK, Fargate, ECS, EC2, Lambda, S3, APIGateWay, CloudWatch, SQS, DynamoDB, RDS), PostgresSQL, AWS Cloud Formation, Oracle

**Avanos Medical, Irvine, CA May 2019 – Oct 2020**

**Java Developer**

A medical technology company that delivers the technical solution to the client. Worked on a web application in an internal network, which was used for project group members to manipulate experimental data, evaluate product simulation results, and manage the experiment file system.

**Responsibilities:**

* Involved in various phases of the **Software Development Life Cycle (SDLC)** of the application Requirement gathering, Design, Analysis, and Code development.
* Developed The **Restful API** in the application using Spring boot framework which is used for evaluating and labeling ultrasonic images for the deep learning system
* Published and consumed Restful web services for organizing and storing unprocessed data in **AWS DynamoDB** table and implemented AWS lambda trigger functions for data collections
* Managed TB-level experimental and metadata into DynamoDB and built the data pipeline to auto-refresh upcoming data weekly
* Integrated the persistence layer in the Spring boot application, developed POJO classes, and used Hibernate as the **Object Relational Mapping(ORM)** tool to access the persistent patient data and map tables from the Oracle database
* Participated in **Agile Scrum methodology** for application development and was involved in the analysis, design, coding, and unit testing of business applications in a fast-paced environment.
* Developed business layer and data access layer using Spring associated with Hibernate and **JPA** to manipulate database for achieving updated functional requirements
* Used **Spring Core** annotations for Dependency Injection(Spring DI), Spring MVC for Restful API, and **Spring Boot** for **Microservices**
* Assisted in integrating **micro-services** with **Docker container** to build and deploy the project on AWS EC2 instance
* Tested the **Restful Web API** using client-side **HTTP** requests in Postman.
* Involved in daily Scrum meetings and retrospective meetings as part of agile methodology

**Environment:** Java8, Spring, JPA, AWS DynamoDB, AWS Lambda, AWS EC2, Docker, JSP, CSS3, HTML5, JavaScript, ReactJs, Gradle, Git, Oracle, Windows.

**Lowe Enterprises, Los Angeles, CA Apr 2018 – May 2019**

**Java Developer**

Real estate investment and management are Lowe’s major business. The company used different professional data analysis and management systems for tracking the estimation of cost and surplus. The development team I worked with was responsible for the internal web application for data management and visualization

**Responsibilities:**

* Interacting with teammates to understand the business and the business users for gathering the requirements.
* Involved in gathering and analyzing business requirements and converting them into technical specifications.
* Involved in implementing and utilizing the **J2EE** patterns **MVC, Dependency Injection, Data Access Object, Business Delegate, Service Locator**, and Singleton for the enterprise application.
* Developed Class Diagrams and Sequence Diagrams as part of Module Design Documentation.
* Developed the User Interface using JSTL, Custom Tag libraries, **HTML, XHTML, JavaScript,** and **CSS.**
* Involved in designing and developing the **Microservices** based on the requirements functionalities.
* Developed services to provide **RESTful API** utilizing Java persistence API.
* Provided support for integrating **MongoDB** and Redis to the RESTful web services with clients.
* Used **Spring MVC, Spring Security**, and **Spring RESTful web services** for application design.
* Designed and developed **SQL scripts** to meet business requirements.
* Developed User-Interface using Servlets, **JSP**, and **JavaScript.**
* Developed UI pages using **HTML, JSP**, and **AJAX** for asynchronous communication.
* Developed front-end view pages in the data representation layer using **HTML 5, CSS 3, JavaScript**
* Developed the application using Struts Framework that uses Model View Controller (**MVC**) architecture with **JSP** as the view.
* Followed Agile Software Development Methodology and **Test Driven Development (TDD**) to build the application iteratively and incrementally. Participated in scrum-related activities and Daily Scrum Meetings.
* Used Axios service to update **HTTP** requests in React components.
* Used **Log4j** for logging errors and publishing logging information to various destinations.
* Used **Git** as the version control tool to update completed tasks.

**Environment:** Java8, Spring, MyBatis, JSP, Log4j, CSS, HTML, JavaScript, ReactJs 16, Maven, Redis, MongoDB, Git

**Credencys Solution Inc, Los Angeles, CA Sep2016 – Mar 2018**

**Java Developer**

Credency is a software solution company that delivers its value by providing services for end-to-end web, cloud, and mobile application development to many enterprise-level corporations and groups. My responsibility was to develop the post of the sales web application for Credency’s client to fulfill the requirements of the e-commerce system.

**Responsibilities:**

* Involved in all phases of **Software Development Life Cycle (SDLC)** including analysis, design, development, and testing of the project.
* Implemented REST-based services using Spring Boot MVC and persistence using **Spring AOP**.
* Developed the application using **Spring framework** that leverages classical **MVC architecture.**
* Integrated persistence layer with Hibernate Objects and Relational persistence mechanism.
* Integrated Spring controllers, service components, DAOs, and user interface for data model and flow of the server-side development.
* Applied error handler to different back-end services that correspond to input type validation.
* Integrated frontend single page application by **Angular 7, HTML5/CSS3,** and **Bootstrap 4** with backend services.
* Modified updating, deleting, and reading services with different **HTTP** methods to satisfy the function calls in Angular Single page application.
* Used Observable and Subscription in **Angular 7** to send HTTP requests for establishing the connection with the backend server.
* Updated Angular route module to redirection links using **Angular** routing services.
* Developed test cases using **Mockito** to validate several business rules in the application.
* Experienced the whole life cycle of project development managed using **Agile** and **Scrum methodology**
* Tracking bug fixing and project life cycle using Jira source control tool and **Bitbucket**.
* Involved in developing Integration Issues, System Testing Issues, User Acceptance Issues, and Production Issues including **JUnit.**
* Used Git source code management and source tree for managing the code push, pulls, and resolving conflicts.

**Environment:** Java, spring, Hibernate, Angular 7, CSS, HTML, JavaScript, Maven, MySQL, Mockito, Git, Oracle

**DirecTV, El Segundo, CA Jan 2015 – Aug 2016**

**Java Developer**

At DirecTV, my responsibility was to develop the post of the sales web application for Credency’s client to fulfill the requirements of the e-commerce system.

**Responsibilities:**

* Involved in the Development, testing, and maintenance phases of **SDLC.**
* Developed the User Interface using Servelet, **JSP, and HTML.**
* Designed front end using **JSP, HTML, CSS,** and **JavaScrip**t for Client-Side validations.
* Used **SOAP** over **HTTP**for invoking stateless session EJB in the web service call.
* Design UI screens using **JSP, CSS, JavaScript,** and **HTML.**
* Used Hibernate as the **ORM tool** to be able to integrate the software with the **Oracle** database.
* Involved in production support of the existing project, with experience in working with the **Jira** tool.
* Prepared documentation and participated in preparing the user’s manual for the application.
* Extensively involved in **Unit testing** and coordinated with the testing team and fixing bugs at various stages of application development. Tracked defects using QC.
* Developed and debugged applications using **IntelliJ** IDEA.

**Environment:** Java, JSP, HTML, Servlets, SQL, Oracle, Jira, Maven, Web Services, SOAP, XML, Jira, IntelliJ, Oracle, Windows.