Tarun Kumar Sahu

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OBJECTIVE:

Full Stack Developer with extensive experience in Application Development using Java, Spring Boot, Angular, HTML, XML, CSS, WCAG, JavaScript, React, and jQuery.

10 years of experience as a Full Stack developer in designing the web applications with a solid understanding of Cloud AWS, Backbone.js, Handlebar.js, Angular JS, Angular 2/4, Backbone.js, Bootstrap, AJAX, HML, LESS, SASS, CSS, Apache Cordova, Ember.js, Object oriented JavaScript, PHP, XML, XSL, XSD, XSLT, DTD, DOM, jQuery, React JS, JSON, Node JS, MVC framework, and JAVA/J2EE technologies.

PROFESSIONAL SUMMARY:

- Extensive Design, implement and test services experience in a Java, Micro Service-oriented architecture and has implemented the REST based Microservices using the Spring Boot, Spring Data with JPA (Java Persistence API).
- Experienced in working with redux architecture using complex Object-Oriented concepts in improving the performance of the websites.
- Experience in developing server-side applications using Spring Framework like Java Spring Boot, Spring MVC, Spring Resources, Spring JDBC and Hibernate.
- Expertise in developing multi-tier enterprise-level web applications using various J2EE technologies including JSP, Servlets, Struts, Spring, Hibernate, JTA, JDBC, JNDI, JMS, Java Multi-threading API.
- Cloud: Experience on working with Cloud Computing Service environment like Amazon Web Services (AWS) and managed AWS like EC2, S3 bucket, Virtual Private Cloud (VPC) through AWS Console and API Integration.
- Expertise in React JS framework to develop the SPA, Experienced in React JS and working with React Flux architecture.
- webMethods Integration Server: Configuration, administration, and development of integration solutions.
- webMethods Adapters: Experience in implementing and configuring Adapters for JDBC, SAP, Salesforce, REST, and SOAP.
- API Management: Proficient in webMethods API Gateway for API management, security, and analytics.
- Business Process Management (BPM): Design and automation of business processes using webMethods BPM.
- Enterprise Service Bus (ESB): Implementation of ESB patterns and asynchronous messaging with webMethods Broker and Universal Messaging.
- Troubleshooting & Debugging: Strong ability to identify and resolve issues within webMethods components.
- Extensive experience in setting up Trading Partners, document types, and processing rules for seamless B2B integration.
- Experience in developing mobile applications integrated with webMethods for enhanced user experience.
- Proficient in configuring and managing Universal Messaging for real-time data distribution and event-driven architectures.
- Skilled in using webMethods Deployer for automated deployment and version management of integration solutions.
- Performance Tuning: Optimizing webMethods environments for enhanced performance and scalability.
- Proficient in GraphQL: In-depth understanding of GraphQL principles, concepts, and best practices for designing and developing efficient APIs.



- Strong knowledge of implementing error handling and input validation mechanisms in GraphQL to ensure data integrity and API reliability.
- Extensive knowledge of SQL (Structured Query Language) and its variants, including T-SQL (Transact-SQL), PL/SQL (Procedural Language/SQL), and others, for database querying and manipulation.
- Proficient in designing and maintaining relational databases, creating tables, defining relationships, and optimizing database performance.
- Strong understanding of creating and utilizing stored procedures and functions to encapsulate business logic and improve application performance.
- Experience in optimizing performance using various RxJS patterns.
- Expertise in using Angular to build responsive and dynamic web interfaces, utilizing Angular's latest features, such as Reactive Forms, Reactive Programming, and RxJS Observables.
- Comprehensive experience in implementing state management solutions using NgRx
- Experience in using React JS components, Forms, Events, Keys, Router, plus Redux, Animations and Flux concept.
- Skilled in developing User Interfaces using JavaScript, jQuery, Bootstrap, Ajax, AngularJS, Angular, ReactJS, Java Spring Boot framework.

Microservices

- Expertise in Spring modules Spring MVC, IOC, AOP, JDBC, JTA, IO, Spring Boot, Spring Microservices, Spring REST, Spring Eureka, Spring Ribbon, Spring Netflix, Spring.
- Implemented continuous integration and deployment (CI/CD) pipelines with Jenkins and Docker, facilitating the automatic deployment of Scala applications to production environments.

AWS

- Proficient in AWS Cloud platform and its features including EC2, VPC, EBS, AMI, SNS, RDS, EBS, CloudWatch, CloudTrail, CloudFormation, Auto Scaling, CloudFront, IAM, S3, and Route 53.
- Possess Knowledge of Server infrastructure development on AWS Cloud, extensive usage of Virtual Private Cloud (VPC), CloudFormation, CloudFront, EC2, RDS, S3, Route53, SNS, SQS, and CloudTrail.
- Extensive Work Experience in using XHTML, XSL, XSLT, CSS2/CSS3, LESS, SASS, Bootstrap, Backbone.js, Handlebar JS, AngularJS, to develop pipeline complex web page layouts with rich UI and responsive design including various sections like headers, footers, content area, side bars and checked the cross-browser compatibility with browsers like Google Chrome, Internet Explorer, Mozilla Firefox, Safari.
- Implemented Docker container service, build pipeline like Jenkins, Bamboo and CI/CD for Continuous Integration and Continuous Deployment that can run on the cloud or on-premises.
- Implemented various screens for the front end using React.js and various predefined components from NPM (Node Package Manager), bower and redux library for Dependency management.
- Expertise in using of JavaScript build tools task runners Webpack for React Angular 2.0/4.0, Node.js Grunt, Gulp for Angular 1.0, Browserify for packaging Node Modules for browsers.
- Implement the MERN web application using technologies (MongoDB, Express JS, React, Node.js) along with HTML5, CSS3, JavaScript, jQuery, Bootstrap and other web technologies.
- Good expertise in visual design UI & UX design, strategy, web development and relate targeted business goals on entire project lifecycle and proficient with Sketch, Adobe Creative Suite, modern browser technologies and crossdevice design.
- Expertise in lazy loading, change detection strategies, and Ahead-of-Time (AOT) compilation.
- Excellent experience in developing the mobile/web applications using the new technologies like ECMAScript 5/6, AngularJS, Angular 16, Apache Cordova, Backbone.js, React Native, TypeScript, CSS media queries, Bootstrap to implement the Model View Controllers (MVC) and Responsive Web Design (RWD).
- Experience in end-to-end testing using tools like Protractor.
- Experience in paired programming as both a driver and navigator, collaborating closely with team members to produce high-quality code.
- Experience with other libraries and tools such as Angular Material, NgBootstrap, and NGX-Translate for internationalization.
- Experienced in Angular 2 Templates, Directives, Routing and Navigation, Components, Services and Data Binding and Angular 12 MVC framework for application development, creating modules and filters, controllers, factory services, \$http methods consume Rest web services.

- Managed AWS Lambda functions for serverless computing, optimizing application scalability and cost-effectiveness.
- Configured AWS S3 buckets for secure and scalable storage of application assets, ensuring high availability and durability.
- Implemented AWS IAM roles and policies to enforce secure access controls and permissions management.
- Utilized AWS CloudFormation for infrastructure as code, automating deployment and management of AWS resources.
- Deployed applications on AWS EC2 instances, ensuring reliable and scalable hosting environments.
- Set up AWS Auto Scaling to dynamically adjust compute capacity based on traffic demands, optimizing performance and cost efficiency.
- Implemented AWS CloudWatch for monitoring and alerting, ensuring proactive management of application performance and health.
- Utilized AWS RDS for managed relational databases, ensuring data integrity and availability for critical applications.

TECHINICAL SKILLS:

Mark-up/XML /U Technologies	HTML, HTML5, XSLT, JavaScript, Dojo, CSS, CSS3, XML, XSD, AJA jQuery, JSON, Angular 12, Angular 4, Node.js, React JS.
Languages	Java , SQL, PL/SQL, Java Servlet, JSP, JDBC, JSTL, Data structures.
Services	Web services Microservices, SOA Architecture, SOAP, RESTful, JAX-I JAX-WS and Jersey
JavaScript Libraries:	jQuery, Angular.js, MEAN.js, Require.js, Backbone.js
Cloud Platforms	AWS (EC2, EBS, RDS, Lambda) ,GCP (BIG query, Cloud Data Pro Google Cloud Storage)
Web/App Servers/Containers	WebSphere, Apache, Tomcat, JBoss EAP, WebLogic and Docker.
Databases	IBM DB2, Oracle, PostgreSQL, Hadoop HDFS, NoSQL MongoDB
Development Tools	Eclipse, Spring Tool Suite (STS), IntelliJ.
Testing Tools/ Frameworks	SoapUI, Rest Client, JUnit, Mockito, Jasmine, Karma, Selenium, Cucumb Redux, TypeScript, Jest
Version Control Tools	GitLab, GitHub, Bitbucket.
Build-Automation Tool	(CI)/Issue Tracking Tools Maven, Terraform, Gradle, Apache ANT, Jenkin JIRA.
Design Patterns	MVC, Factory, Front Controller, Singleton, Observer and DAO patterns

EDUCATION AND CERTIFICATIONS

Master of Science: University of Texas at Dallas, Richardson Bachelor of Engineering: Indian institute of Technology Guwahati

PROFESSIONAL EXPERIENCE

Project: Electronic Benefits Transfer (EBT) Application Development

Client: Conduent

Duration: April 2024 – Present

Project Overview:

As a Full Stack Java Developer, I have been involved in the development of the EBT application, utilizing my skills in Java, Spring Boot, and Angular. This project focuses on delivering secure, scalable solutions for managing government EBT transactions while maintaining high standards of security compliance and system efficiency. I actively participate in customer technical discussions and contribute to improving the overall code quality and development processes.

Responsibilities:

- Collaborating closely with cross-functional teams and stakeholders to deliver innovative solutions.
- Leading full-stack development using Java, Spring Boot, REST APIs, and Angular 9 and above.
- Designing and developing database components using PostgreSQL for seamless integration with the EBT system.
- Designed and implemented secure Key Management Systems (KMS) for high-availability enterprise applications, ensuring cryptographic integrity and access control.
- Developed and deployed RESTful APIs and event-driven microservices using Java (Spring Boot) and Axon framework, supporting millions of secure transactions.
- Built messaging-based systems using Apache Kafka, ActiveMQ, and IBM MQ for high-throughput distributed processing.
- Containerized applications with Docker and orchestrated microservices in Kubernetes clusters across AWS and Azure environments.
- Automated CI/CD pipelines using Jenkins, Maven, and Git, integrating quality checks via SonarQube and deploying to multiple environments.
- Applied design principles like SOLID to ensure clean, maintainable, and scalable code.
- Conducted comprehensive integration testing to verify system interoperability and functionality across services
- Collaborated in agile teams to build systems utilizing confidential computing principles, ensuring data security at rest, in transit, and during processing.
- Used SQL Developer and PostgreSQL for complex query optimization, data integrity checks, and schema evolution tasks.

Client: Freddie Mac, McLean VA Sep 2022- March 2024

Java Full Stack Developer

In my role as a Full Stack Java Developer, I lead the development of a robust primary marketing loan application system, designed to streamline the processing and approval of loan applications. This system, built on the foundations of Java microservices architecture, enabled seamless data persistence and real-time processing of loan applications across multiple platforms.

Key Contributions:

- Developed Microservices using Java 8 and Spring Boot for application processing, data persistence, and report generation, enhancing the scalability and maintainability of the loan processing system.
- Implemented Data Persistence mechanisms for robust storage and retrieval of loan application data, facilitating real-time processing and decision-making.
- Architected Front-End Applications using Angular and Spring MVC, providing intuitive and secure user interfaces for loan application submission and management.
- Integrated Angular Material Design components for consistent UI across the application, ensuring a modern and user-friendly experience. Implemented Angular Reactive Forms to manage and validate complex data entry scenarios, ensuring data integrity at the front end. Utilized Angular Services and Dependency Injection for modularizing application logic and promoting code reusability. Enhanced Front-End performance with Angular Universal for server-side rendering, improving initial load times and SEO. Configured Angular application environments for different deployment stages (dev, test, prod) using Angular CLI, ensuring seamless transitions.
- Designed and Developed the Reporting Module for dynamic generation of reports based on loan application data, offering valuable insights into application statuses and outcomes.
- Enabled Continuous Integration/Continuous Deployment (CI/CD) with Jenkins, improving development efficiency and ensuring reliable, automated deployments.
- Utilized design patterns such as Circuit Breaker and Caching to enhance system resilience and performance.
- Ensured application security by implementing access control, authentication/authorization, and tokenization strategies to protect sensitive data.
- Utilized Docker and Kubernetes for containerization and orchestration, significantly enhancing the application's deployment flexibility and scalability across environments.
- Leveraged AWS Lambda functions for event-driven microservices, optimizing scalability and reducing operational overhead. Utilized AWS RDS (Relational Database Service) for scalable and managed relational databases, ensuring high availability and durability of application data. Configured AWS ECS (Elastic Container Service) for Docker container orchestration, simplifying deployment and scaling of containerized applications. Implemented AWS CloudWatch for monitoring and logging Angular and Java applications, ensuring visibility into application performance and health. Integrated AWS Cognito for user authentication and authorization in Angular applications, ensuring secure access control and user management.
- Implemented Comprehensive Testing Strategies using Cucumber for regression testing, ensuring high application quality and reliability.
- Optimized Database Maintenance and performance tuning, ensuring high data integrity, availability, and system responsiveness.
- Facilitated Secure Data Exchange and application processing through the development of RESTful APIs, adhering to best practices in security and data protection.
- Collaborated Across Teams to align development efforts with business requirements, leveraging agile methodologies for timely and effective project delivery.

Client Apple, Austin-Texas

Jul 2016 - Aug 2022

Apple production support - System Engineer Project Description: Apple Production Support

In my position as a System Engineer in Apple Production Support at Apple, I was deeply involved in various stages of the Software Development Life Cycle (SDLC). My responsibilities spanned across multiple project stages, and I actively contributed to deliverables following the AGILE software development methodology. I utilized a Micro Services architecture, primarily leveraging Spring Boot REST-based services, which interacted

through a combination of REST, Swagger, Kafka, and Splunk. My primary focus was on Apple's HR web application, where I provided onsite production support. My expertise in Java was evident through my use of features like Concurrency, Streams, Filters API, Lambda Expressions, and Collections. I was also instrumental in developing REST API's using Spring Boot and promptly responded to incidents, identifying root causes, and implementing real-time solutions. I closely monitored requests from front-end applications like Merlin manager, Schedule Manager, and MyPage, which were developed in Swift & Angular 12, ensuring they seamlessly consumed Spring Boot RESTful services. My role also involved manipulating data using CRUD operations in MongoDB and Oracle 11g management systems, with Spring Boot managing database access. I developed test cases and conducted unit tests using Mocha, and I extensively utilized Jenkins for CI/CD processes. The primary tools and technologies in my environment included JIRA, Angular 12, Spring Boot, Spring JPA, REST, HTML5, CSS3, Agile, Web services, CI/CD, Microservices, MongoDB, and Oracle 11g.

Key Contributions:

- Updated E-commerce billing and payment system using microservices in Java 11 Spring Boot and REST, deploying on AWS for centralized management.
- Implemented AWS Lambda, DynamoDB, S3, API Gateway, ECS, CloudWatch, RDS, IAM, EC2, and CloudFormation for various functionalities.
- Designed and developed Client/Server applications with smart device interfaces, managing build processes and repositories.
- Developed business and persistence layers using MySQL, PostgreSQL, Hibernate, Spring Data, JPA, and MongoDB, integrating third-party services via APIs and Webhooks, including Stripe payment API.
- Led a team of 6 developers in India to build a React application using React, Redux, and TypeScript, focusing on TDD principles.

Responsibilities:

- Implemented the application using Spring IOC, Spring MVC Framework, Spring Batch, Spring Boot, and Spring Web MVC and handled the security using Spring Security.
- Created and injected Spring Services, Spring Controllers and DAOs to achieve dependency injection and to wire objects of business classes.
- Used Microservices architecture with Java 11 Spring Boot based services interacting through a combination of REST and Spring Boot.
- Worked extensively on the spring framework, implementing Spring MVC, Spring Security, IOC (dependency injection) and Spring AOP.
- Expertise in writing complex SQL queries to retrieve, manipulate, and aggregate data from relational databases, including Oracle, MySQL, PostgreSQL, and SQL Server.
- Designed and developed the application using Core Java, J2EE, Struts and Hibernate.
- Developing the Microservices using Java 11, Spring Boot that create, update, delete and get the assignment information from backend.
- Utilized HBase for real-time data storage, enhancing the system's ability to manage large-scale transaction data.
- Coordinated the implementation of unit and integration tests using Jest and React Testing Library, improving code coverage by 60%.
- Led the design and development of webMethods-based integration solutions, ensuring seamless data flow between applications and systems.
- Collaborated with cross-functional teams to gather requirements, perform analysis, and deliver high-quality integration solutions.

- Provided technical guidance and mentorship to junior developers, fostering a collaborative and learningoriented work environment.
- Employed Hive for data summarization, providing insights into various payment transactions.
- Leveraged Apache Spark for efficient in-memory data processing, improving the system's responsiveness.
- Conducted weekly code reviews using Git and GitHub, and provided mentorship on TDD, resulting in more efficient development cycles and improved team proficiency in TDD.
- Collaborated with product owners and business stakeholders using tools like JIRA for project management, translating complex requirements into high-quality software solutions.
- Collaborated with product owners and business stakeholders using tools like JIRA for project management, translating complex requirements into high-quality software solutions.
- Able to interpret and advice on accessibility standards, principles, techniques, and best practices including Web Content Accessibility Guidelines (WCAG).
- Handled code optimization techniques to decrease much use of JavaScript in creating dynamic functionality, with the use of CSS classes. Interacted with Testing Team, Scrum Masters and Business Analysts for fixing of Issues.
- Interacted with Customers and development teams for Fix the Issues.
- Used AJAX and JSON to make asynchronous calls to the project server to fetch data on the fly.
- Create RFP (Request for Proposal) microservices to provide Restful API and RAM utilizing Spring Boot with Microservices.
- Developed and maintained RESTful APIs using Java 11, with extensive knowledge of Spring Framework, Spring Boot, and Hibernate. Utilized Angular's HTTP Client module to consume RESTful APIs and provide seamless communication between the front-end and back-end.
- Created and deployed new features to sustain and amend existing application in safari and chrome.
- Involved in Agile software development life cycle (SDLC) with SCRUM Jira/Kanban methodology.
- Integrated paired programming into agile development cycles, aligning with sprint goals and ensuring timely delivery.
- System Testing, Regression Testing for Complete UI after fixing Issues reported by Testing Team.
- Migrated existing Monolithic architecture to full-fledged Microservices architecture using Spring Boot & Spring Cloud in multiple stages.
- Designed and implemented database schemas, including tables, views, indexes, and constraints, using SQL and PL/SQL. Optimized database performance by fine-tuning SQL queries, indexing, and partitioning.
- Provided consistent environment using Kubernetes for deployment scaling and load balancing to the application from development through production, easing the code development and deployment pipeline by implementing Docker containerization
- Monitored and troubleshooted Java 11 applications using monitoring and logging tools such as ELK Stack, Grafana, and Prometheus. Utilized Java 11-based profiling and optimization tools, such as YourKit and JProfiler, to identify and fix performance bottlenecks.
- Proficient in using Angular CLI to automate tasks, such as scaffolding new components, building, and deploying Angular applications. Utilized Angular's NgRx library to manage state and provide a predictable and scalable data flow.
- Used Redux Framework architecture (like Reducers, Containers, and Saga) for integrating the data with React-Native Application.
- Successfully migrated an enterprise application stack consisting of Azure VMs, Azure SQL Database, and Azure Virtual Network to AWS, utilizing AWS Server Migration Service (SMS), AWS Database Migration Service (DMS), and AWS CloudFormation.
- Designed and developed Java 11 database access layers using Hibernate and Spring Data, with experience in SQL and NoSQL databases, including MongoDB, PostgreSQL, MySQL, and Oracle.

- Strong understanding of Azure and AWS cloud architectures, including virtual networks, subnets, load balancers, and security groups.
- Knowledge of Azure Active Directory and AWS Identity and Access Management (IAM), with experience in designing and implementing secure access control policies.
- Strong understanding of cloud-native development practices, including serverless computing, microservices, and containerization, with experience in using Azure Functions and AWS Lambda.
- Worked in Agile teams using Java 11 and Spring Boot, utilizing JIRA and other Agile tools to manage backlogs and sprints. Participated in sprint planning, daily stand-ups, and retrospective meetings to improve team collaboration and productivity.
- Actively participated in mentoring junior developers through paired programming, accelerating their onboarding and skill development.
- Worked on state, props and events to create interactive React JS components.
- Developing Single Page Applications using Angular 12 along with Reactive Javascript Library RxJS
- Used two-way data binding features of Angular to implement Data binding to bind various server controls to the data from database.
- Deploying the application to the AWS S3 cloud platform by triggering build in Jenkins for CI/CD.

Environment: Java 11, J2EE, JSP, Servlets, Spring MVC, SQL/PLSQL, ATG, Web Services, WebLogic 12, Oracle 12c, HTML, LESS, CSS, Microservices, JavaScript, jQuery, Backbones.JS, Angular.JS, Jasmine, Karma-test-runner, Agile, Scrum, Kanban, Adobe Bracket, XML, SVN, Windows 7, Photoshop, IE, Chrome, Mozilla Firefox, PL/ SQL, SQL, Oracle, Windows, Docker. AWS, Cassandra NoSQL, Azure

Client: Digital Tech, India May 2013 – July 2016

Role : Java/J2EE Developer

Project Description: Financial Transaction Processing Services

In my role as a Java/J2EE Developer at Digital Tech, India, I was involved in a complex project related to Financial Transaction Processing Services. I worked on breaking down a monolithic system into different subsystems using Microservice architecture and Cloud architecture with AWS. Additionally, I utilized the Hadoop stack, including HDFS for distributed storage, HBase for real-time big data storage, Phoenix for SQL-based querying, Hive for data summarization, and Pig for data analysis. I also leveraged Apache Spark for inmemory data processing, enhancing the system's ability to handle large-scale financial transaction data. These technologies were instrumental in providing robust and scalable solutions for payment processing for credit and debit cards, electronic cash, automated teller machines, and traveler's checks, serving both B2B and B2C customers worldwide.

Responsibilities:

- Used ReactJS for templating for faster compilation and developing reusable components.
- Solved defects identified by the QA team, and wrote unit test cases using the JEST unit testing framework for the application developed in ReactJS and NodeJS as the backend.
- Optimized Microservices using NodeJS and ES6 as interfaces to Cassandra NoSQL database.
- Used ReactJS Components, Forms, Events, Keys, Router, Animations, and Flux concept.
- Created reusable React components and managed application state with Redux.
- Worked on database design and development that involves Relational database schema.
- Developed Mockito and JUnit test cases to improve code coverage
- Tested the performance of API using SoapUI, Postman, and JMeter.
- Develop MDM Server extensions and additions in MDM workbench Code maintenance scripts to implement business logic for multiple clients and carry out one-time operational activities

- Maintained build profiles in Team Foundation Server and Jenkins for CI/CD pipeline
- Used JIRA as the bug tracking system to track and maintain the history of bugs/issues on everyday basis. Writing service methods and SQL queries, PL/SQL to interact with Oracle.

Environment: Java, Spring, Hibernate, Spring Boot, AWS Cloud, Docker, Kubernetes, Linux, Maven, RESTful Web Services, HTML5, CSS3, ReactJS, Bootstrap, JavaScript, jQuery, Ajax, NodeJS, MongoDB, Oracle, SoapUI, Postman, API Life Cycle, Team Foundation Server, Jenkins, Cucumber, JUnit, JMeter, Git,

Academic Experience

- Distributed personal cloud storage: Java, MySQL. AWS, Mango DB, JavaScript
- Created a java application to unify cloud storage from providers google drive, Microsoft one drive, Dropbox. Divided files in parts and distributed among different providers. Maintained a table of file part positions by encrypting it with user's passphrase, combining back file blocks when user requests file.
- Distributed PubSub: Java, Docker, Socket Programming, Web sockets, Javascript
- Used popular protocol http and web socket for brokers to connect to publishers and subscribers.
- Created a network of 5 brokers which can in theory handle 300K subscribers.
- Implemented Rendezvous Routing technique for dispersing published messages to broker network.
- Each broker maintains a uuid table to avoid duplicate message routing in network.
- Used Docker containers and Docker network to orchestrate message travel in distributed broker
- Network on single machine.
- Project 2) Auto Insurance Re-Evaluation (AIR) Decision Support System (DSS): Built a proof of concept (POC) Auto Insurance Underwriting (AIU) Decision Support System (DSS) that provides advice to underwriters. Integration Services, connectors, Adaptors development