**Full Stack Developer.**

**Akhil B Rao**

**Ph no: (+1) 281-990-3479**

**Email -**[**bakhilrao9@gmail.com**](mailto:bakhilrao9@gmail.com) **LinkedIn -** [**https://www.linkedin.com/in/akhil09b/**](https://www.linkedin.com/in/akhil09b/)



**PROFESSIONAL SUMMARY**

I am a highly skilled Java Full Stack Developer with 9 years of experience in the field. I have expertise in developing enterprise-level applications using Java, Spring Boot, AngularJS, React JS, and other related technologies. My experience includes designing, developing, and deploying scalable, high-performance applications in a team environment. I possess excellent communication, problem-solving, and analytical skills, which enable me to collaborate effectively with cross-functional teams to deliver quality solutions on time.

* Worked extensively on J2EE for developing Web and Distributed Applications by using JDBC, JSP, Servlets, Hibernate, Struts and Web Services.
* Responsible for creating and maintaining architecture for Restful API using Spring Boot.
* Strong experience with Java concepts like Exception Handling, Collections, Multithreading. Played around with Synchronized collections and Concurrent Collections.
* Proven expertise in Java security frameworks for user authentication and service authorization.
* Knowledge of developing single page web applications by using Angular with typescript/ES and jQuery and working knowledge on HTTP access control CORS to enable cross-origin resource sharing in the project.
* Experience creating Typescript reusable components and services to consume REST APIs using Component based architecture provided by Angular7, Angular 11.
* Having experience in developing Splunk Dashboards and searches.
* Expert in performance tuning and aggregate operations for MongoDB/Postgres
* Strong understanding of Object-Oriented concepts like Inheritance, Polymorphism, Encapsulation etc. Have been practicing the SOLID principles for the application development.
* Used Spring Boot Actuator to monitor and manage the application in production environment.
* Proficient in Mule Soft Any Point API platform on designing and implementing Mule APIs. Strong working knowledge on API Gateway.
* Used ES6 with Node.js to write server-side JavaScript code. With Node.js.
* Implementing or exposing the Microservices architecture with Spring Boot based Microservices interacting through a combination of RESTful and Apache Kafka message brokers.
* Used Angular libraries. Integrated an Angular front-end with a back-end technology such as Node.js, .NET, or Java.
* Used Red Hat OpenShift which is a cloud-based container application platform. Also used OpenShift features such as Source-to-Image (S2I), Kubernetes Integration, Application Monitoring, Security and Compliance, Platform Independence.
* In requirements gathering and analysis phase, we used use case diagrams to describe the interactions between users and the system. During the design phase, we used class diagrams to model the static structure of the system, while we used sequence diagrams to model the dynamic behavior of the system. During the testing phase, we used activity diagrams to model the flow of activities in the system.
* Experience in developing web, enterprise and SOA applications using Core Java, OOAD, Multi - Threading, JavaBeans, JSP, Servlets, JNDI, JDBC, Hibernate, JPA, Spring, Web Services (SOAP, Restful and Micro-Service), XSD, XML, JSON, JAX-B, Apache Commons, EJB, MQ-Series, HTML, Ajax, Oracle, and Linux/UNIX.
* Hands-on experience Java 8 features like Lambda, Streams, Optional, Java Time API, Functional interfaces, and BASE 64 encryption etc.
* Experience in using the Object Relational Mapping Tool Hibernate, strong in using XML mappings and Java Objects.
* Strong understanding of common API technologies, such as OAUTH, SAML, Spring Boot and Micro services.
* Having strong hands-on experience on multithreading and executor framework. Played around with the concurrent collections as well.
* Extensive experience on developing web applications using Spring Boot, Spring Core, Spring MVC, Spring ORM, Spring JPA, Spring Rest and Spring Cloud (PCF).
* Used Redis for caching web pages and reducing server load to increasing performance.
* Handled transactions in Redis in different levels of an risk persistence.
* Implemented built-in replication and automatic partitioning with Redis cluster .
* Having strong understanding of the Java Runtime Engine, monitoring the memory usage and memory management using Garbage Collector algorithms such as G1(Garbage First).
* Application integration using Mule Soft ESB and IBM Message Broker for integrating and orchestrating the services.
* Implemented Kafka consumer and producer configurations to use for high-volume streaming with pub-sub model using multiple inheritance AVRO schemas with same topic.
* I have experience in profiling Java applications using Profiler.
* Captured heap dump and database calls to optimize the JVM usage.
* Good knowledge of spring, IOC, AOP, spring and MVC integration with Hibernate and Struts technologies.
* Deployed the Application into Docker container and made easily accessible at runtime using cloud services like AWS, Netflix Eureka, Spring Hystrix as fallback method, Spring Ribbon for load balancing and a broker service to maintain status using Spring Kafka and Zookeeper
* Implemented Kafka consumer and producer configurations to use for high-volume streaming with pub-sub model using multiple inheritance AVRO schemas with same topic.
* Having good experience with the Rest API, Graph and Web Socket Programming for the Reliable and Real-time communications between the micro services and applications.
* Used Kafka to handle data pipeline for high speed filtering and pattern matching on the fly and monitoring data pipeline operations. This involves aggregating statistics from distributed applications to produce centralized feeds of operational data.
* Expertise in implementing persistence layer using JPA and Hibernate.
* Excellent knowledge in API Versioning and API documentation using Swagger and Open API Specification 3.
* Extensive experience in various spring modules such as Spring Boot, Spring Security, Spring AMQP, Spring Data JPA and Spring Batch.

**Technical Skills**

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| **Programming** **Languages** | **Java 8 and Java 11, Java Script (ECMAScript 2016), Type Script** |
| **Frameworks** | **Spring Boot, Spring Data, Spring AMQP, Spring AOP, Spring Cloud, Spring Security, Spring Batch, J2EE Application Server, authentication and authorization** |
| **Monitoring** | **New Relic, AWS Cloud Watch and ELK (Kibana, Logstash, Elastic Search)** |
| **Cloud Technologies** | **AWS (EC2, SQS, SNS, RDS, Cloud Watch, Route 53, IAM, AWS Fargate)** |
| **Messaging Platforms** | **Kafka, RabbitMQ and AWS SQS** |
| **UI Technologies** | **Angular 9, React.JS, Bootstrap, Angular Material UI, NodeJS, SAAS Preprocessors.** |
| **DevOps** | **Jenkins, Docker, Kubernetes, and Elastic Search** |
| **Relational Databases** | **Postgres and Oracle** |
| **No SQL Databases** | **MongoDB, DynamoDB, Cassandra, Redis** |
| **Build Tools** | **NPM, Maven and Gradle** |
| **IDEs** | **IntelliJ, Spring Tools Suite (STS), DBeaver & VS Code, Tomcat,** |
| **Source** **Code** **Management** | **BitBucket, GitLab** |
| **Agile** **Methodologies** | **JIRA & SCRUM framework** |
| **Integration Systems** | **Apache Camel, Spring Integration** |
| **Testing Tools** | **JUnit, Mockito Rest Assured** |
| **Application** **Servers** | **Apache Tomcat, Netty, IBM WebSphere** |

**Professional Experience**

**Nuthan Technologies, Houston, TX, USA December 2023 – Till Date**

**Role – Senior Full Stack Developer.**

**Responsibilities:**

* Involved in all phases of Software Development Life Cycle including requirement, analysis, design, development, testing, release of the project and support.
* Build scripts on AWS cloud for scheduling EC2 auto scaling load balancer with python SDK
* Converted a monolithic app to micro services architecture using Spring Boot using 12 factor app methodology. Deployed, Scaled, Configured, wrote manifest file for various Microservices in AWS.
* Hands on Java 1.8 full stack with spring boot, Spring Cloud, Spring Security, Spring Data JPA, Spring AOP, and Hibernate.
* Dynamic loading of JSP's using AJAX.
* Implemented Java security protocols, ensuring authentication and authorization for services and user accounts.
* Configured application servers such as Tomcat and WildFly for deployment of Java applications.
* Developed Splunk reports that provide a high level overview of the Application Health.
* Used Java 11 features such as Local-Variable Syntax for Lambda Parameters, HTTP Client, Flight Recorder, ZGC, Single-file Source code Programs for the development
* Built Single Page Applications framework. Built Angular 11 framework including MVC architectures, different modules, templates, custom directives, and custom filters.
* Used Angular 11 framework where data from backend is stored in model and populated it to UI.
* Integration of SEARS Product Management REST API's.
* The application is built in Micro Service Oriented Architecture using MEAN 11+ (Mongo, Express Angular 11.0 and Node) stack and developed Single Page Applications (SPA).
* Developed multiple Angular 11.0 components that are compatible with the latest versions of typescript, angular CLI.
* Performed Angular end to end testing using Protractor framework and Integration testing methods and Behavioral driven are implemented using Selenium and Cucumber respectively.
* Strong experience in building applications using the JavaScript Mean stack: MongoDB, Angular JS, Express.js, and Node.js.
* Optimized RESTful web services for high availability and efficiency using Spring REST and Spring Batch.
* Utilized Jenkins and GitLab for CI/CD pipeline management to enhance deployment processes.
* Used Angular for templating for faster compilation and developing reusable components.
* Expertise in using JavaScript build tools and task runners like Webpack for React and Angular 8.0, Grunt, Gulp for Angular, Browserify for packaging NodeJS modules for browsers.
* Monitoring application metrics such as CPU, Memory..etc using APM tools such as Dynatrace, Grafana, Prometheus.
* Implementation of Restful web services using Spring REST.
* DNS/DHCP, Load Balancing (F5 Networks, AWS ELB), Firewalls (Cisco Systems, Juniper Networks), IDS/IPS, IPSEC VPN)
* Setup Maven Profiles to connect DEV/QA/PERF/PROD.
* Extensively used JAXB parsers to parse XML into objects.
* Extensively worked in Test Driven Development (TDD) framework using JUnit.
* Designed and developed the application using agile methodology and followed Test Driven Development (TDD), Scrum.
* Part of team implementing REST API's in Python using micro-framework like Flask with SQL Alchemy.
* Developed restful Web-services using Django Rest framework in Python.
* Executed parallel browser testing on various machines using Selenium Grid and performed cross browser testing.
* Developed secure web services using Spring Batch, integrated with MongoDB for real-time data processing and storage optimization.
* Performed ad hoc data analysis and custom reporting, leveraging advanced query techniques in Postgres.
* Experience in automating the infrastructure in AWS using web services.
* Deployed spring boot application on AWS Elastic Beanstalk.
* Used Spring Constructor Dependency Injection for injecting the object dependencies.
* Developed Servlets and servlet listeners to communicate between SAP GUI and Smart GWT server side.
* Developed Splunk reports that provide a high-level overview of the Application Health
* Designed and developed the REST based Micro services using the Spring Boot, Spring Data with JPA and used Swagger to interact with API endpoints of the micro services.
* Worked in Integration Systems Such as Apache Camel and Spring Integration.
* Automated the performance testing using JMeter to measure the performance with 100+ active sessions
* Involved in continuous integration and DevOps methodologies such as Docker, Kubernetes, Jenkins, Gradle, Jenkins File, Docker File and Elastic Search.
* Developed story/task by following TDD/BDD and Pair programming concepts.
* Deploy enterprise web applications using technologies such as Sencha ExtJS, Java 1.8, JavaScript, CSS3, and HTML5.
* Developed CI/CD system with Jenkins on Kubernetes environment, utilized Kubernetes and Docker for the runtime environment for the CI/CD system to build, Test and Deploy.
* Performance tuning on JIRA by deleting inactive workflows, screens, field configuration not associated with any project.
* Implemented Microservices Architecture with Spring Boot based RESTful services and consumed SOAP based Web Services.
* Used Splunk for the engineering dashboards used by the developers for easy track of application health.
* Worked on creating Microservices using Jersey and spring.
* Used React.JS for creating views to hook up models to the DOM and synchronize data with the server as a SPA.
* Used Scala on both the server-side and client-side of web applications. On the server-side, used Scala to build web servers and APIs using frameworks such as Play, Akka HTTP, and Finch. In order to provide easy-to-use abstractions for handling HTTP requests and responses, managing databases, and handling concurrency.
* On the client-side, used Scala to build web user interfaces (UIs) using libraries such as Scala.js and React-Scala.
* Working Experience in Messing Platforms such as Rabbit, Kafka, AWS SQS.
* Developed web applications running on Node JS using the Express framework, Vue.js and with Mustache.js for front end MVC/tempting.
* Create external tables with partitions using Hive, AWS Athena, and Redshift
* Create user defined functions UDF in Redshift.
* Develop and optimize CI build jobs with the help of Jenkins.
* I have written the SQL Queries to get the data and update it in the database and to connect databases in the DAO implementation Classes.
* Lead daily stand-ups and scrum ceremonies for two scrum teams.
* Work with product owners to groom the backlog and plan sprints.
* Had knowledge on Kibana and Elastic search to identify the Kafka message failure scenarios.
* Implemented to reprocess the failure messages in Kafka using offset id.
* Daily meeting with different IAM teams and report new/pending IAM issues and concerns
* Having a Strong Experience in continuous integration to deploy changes using Jenkins and automate the tests.
* Experienced in Capital Markets, Fixed Income, Wealth Management, Alternative Investments, Client Statements, Commodities, and front-end trading applications.
* Established and maintained strong relationships across Capital Markets Trading and its business partners.
* Helped migrating and managing multiple applications from on premise to cloud using AWS services like S3, Glacier, EC2, RDS, SQS, SNS, SES, Cloud Formation, VPC etc.

**Environment**: Java8, Spring Boot 2.x, Restful, Spring Cloud, Jax, AWS, Lambda, VPC, Splunk, Cloud Foundry, Angular11, Jira, REST API, Kubernetes, Python, Maven, GIT, Docker, IAM Kafka, SOAP, JPA and Microservices.

**L&T, Plano, TX USA August 2021 to Nov 2023.**

**Role – Full Stack Developer.**

**Responsibilities -**

* Used Scrum Agile methodology with regular 3-week Sprint cycles working on planned/groomed user stories.
* Daily Scrum, Sprint cycle Reviews, Retro and planning meetings in the presence of Product Owner, Scrum Master.
* Involved in building pure React-Redux application from scratch which involves stable, Reusable stateless and stateful React components.
* Monitoring of Gemfire, Kafka Cluster and Topic metrics using Grafana.
* Private Cloud Environment - Leveraging AWS and Puppet to rapidly provision internal computer systems for various clients.
* Enhanced application performance by tuning complex database queries and stored procedures.
* Wrote python scripts to manage AWS resources from API calls using BOTO SDK and also worked with AWS CLI.
* Experience in designing and developing applications in Spark using Scala to compare the performance of Spark with Hive and SQL/Oracle.
* In depth Knowledge of AWS cloud service like Compute, Network, Storage and Identity & access management.
* Responsible for implementation of modules like Initialization, Authorization and Controller request flows and Save Transaction to Database modules.
* Worked on Spring-WS framework for SOAP web services for all LC 6.7 operations.
* Implemented Junit test cases in Curam framework.
* Experienced in implementing Organization DevOps strategy in various operating environments of Linux and windows servers along with cloud strategies of Amazon Web Services (AWS).
* Developed Hibernate mapping files using different mapping strategies such as table per class hierarchy and also used Hibernate Persistence Strategy to interact with database.
* Build RESTful web service by building Node.js Server in the back-end to handle requests sent from the front-end jQuery and AJAX calls.
* Validated forms using Angular 7/6 and regular expressions there by providing client side validation and server validation.
* Used Scala collection framework to store and process the complex consumer information.
* Used Scala functional programming concepts to develop business logic.
* Developed cross-browser/platform HTML5, CSS, and JavaScript to match design specs for complex page layouts while adhering to code standards.
* Created Angular7/6 directives, Controllers, Modules, and Pipes in Typescript.
* Implemented Spring MVC framework in the presentation tier for all the essential control flow, business level validations and for communicating with the business layer.
* Developed code using Design Patterns like DAO, Factory Pattern, Singleton and Value Objects, Decorator, State, Strategy.
* Developed and optimized database queries and procedures for Postgres and MongoDB.
* Designed XSDs and data validation rules using Schema Tron
* Designed and developed the REST based Micro services using the Spring Boot.
* Created RFP Micro service to provide RESTful API utilizing Spring Boot with Microservices.
* Working Knowledge in EC2 by creating snapshots, volumes and security groups for public and private instances.
* Designing and developing Restful API and services using best practices to interact within the Microservices and with the front end. Using spring MVC and spring rest.
* Experienced in implementing Microservices, Service Oriented Architecture (SOA) with XML based Web Services (SOAP/WSDL) using Top Down and Bottom Up approach.
* Implemented Docker container service, build pipe line like Jenkins, Bamboo and Go CD for Continuous Integration and Continuous Deployment that can run on the cloud or on-premises
* Worked on Code builds and code changes are made in JavaScript, Python and Shell scripts.
* Created Views, Sequences in the oracle database and modified the existing PL/SQL stored procedures.
* Sending requests and responses to Micro services through REST/HTTP.
* Developed and directed software systems testing procedures and development strategy.
* Used Jenkins application to build and perform continuous deployments of JBOSS war files.
* Using AWS Glue, I designed and deployed ETL pipelines on S3 parquet files in a data lake.
* Configure backup, alerts, repairs and monitoring of Cassandra clusters using OpsCenter.
* Administered, monitored and maintained multi data-center Cassandra cluster using OpsCenter and Nagios in production.
* Used MongoDB internal tools like Mongo Compass, Mongo Atlas Manager & Ops Manager, and Cloud Manager Etc.
* Worked on MongoDB database concepts such as locking, transactions, indexes, sharding, replication and schema design.
* Worked on Big Data Integration &Analytics based on Hadoop, SOLR, Spark, Kafka, Storm and web Methods.
* Worked on analyzing Hadoop cluster using different big data analytic tools including Flume, Pig, Hive, HBase, Oozie, Zookeeper, Sqoop, Spark and Kafka.
* Used AWS Beanstalk for deploying and scaling web applications and services developed with Java.
* Lead daily stand-ups and scrum ceremonies for two scrum teams.
* Work with product owners to groom the backlog and plan sprints.
* Enhance the performance and capacity of the virtual system of enterprise.
* Used the Multi-Node Redshift technology to implement Columnar Data Storage, Advanced Compression, and Massive Parallel Processing
* Worked with Snowflake cloud data warehouse and AWS S3 bucket for integrating data from multiple source system which include loading nested JSON formatted data into snowflake table.

**Environment**: JDK 1.8, Spring Boot, Spring MVC, Angular7/6, Spring AOP, Hibernate 4.0, Oracle 11g, Mongo DB, Docker, JBoss, Selenium, GIT, Bamboo CI, Chef, MongoDB, JMeter, Karma, AWS, Jasmine.

**Accenture, Austin, TX Aug 2018 to July 2021.**

**Role – Full Stack Developer.**

**Responsibilities:**

* Worked with Business Analysis teams, Product Owner and Clients in collecting and understanding the business requirements and worked with architects in converting them to functional and technical specifications.
* Involved in the Software Development Life Cycle (SDLC), Requirements gathering, Design, and Code, Integration, and Deployment and production phases.
* Built Restful web services using Node JS and Express JS and used a full complement of Express.
* Created Typescript reusable components and services to consume REST API's using Component-based architecture provided by Angular 7/6.
* Created and consumed RESTful API using Express.js to provide centralized logic and reusable data retrieval build on top of Node.js.
* Implemented Logic for pulling the data from the REST API with Axios AJAX and issued HTTP requests to interact with REST endpoints.
* Involved in development of Restful web services using MERN stack, MongoDB, Express React-Redux and Node JS.
* Developed various single page applications (SPA) using React JS and used various components in the redux library.
* Used React-Routers for connecting the APIs which enforces the communication to the server while also implementing mock services in Node.js with the help of modules using Express.js.
* Developed dashboard based on Ajax calls with Business Customers Count, Flags, Real-time graphs for Analytical Reporting using Node JS.
* Implemented JSON web tokens mechanism for authentication and authorization security configurations using Node.js.
* Used React JS virtual DOM for client-side view rendering services, React-Redux for state management and React-Router for client-side routing for dynamically changing client-side content.
* Implemented asynchronous logic for CRUD operations in MongoDB using mongoose connector, and assertions.
* Created Angular 7/6HTTP Client interceptors to add necessary JWT tokens for the outgoing requests from UI.
* Closely worked with Kafka Admin team to set up Kafka cluster setup on the QA and Production environments.
* Developed, implemented unit test cases and integration test cases using chai and mocha.
* Use Selenium for creating the web-based test automation suite and perform functional testing.
* We hosted all our micro services in AWS cloud infrastructure using Jenkins CI/CD pipelines.
* Used Pivotal Cloud Foundry to quickly build, deploy and update the applications and managed Pivotal Cloud Foundry based platform built on Kubernetes programming with deployment manager and containerized using Docker.

**Environment**: Java, HTML5, CSS3, Typescript, REACT JS, REDUX Chai, Angular 7/6, Mocha, Git, NPM, YARGS Grunt, Bower, Spring Security (JWT), MongoDB, Kafka, Node.js, Express, Jetty Server, AEM, Kubernetes, Docker, AWS, EC2, Jenkins, Splunk, Git, Pivotal Cloud Foundry, Selenium.

**Glossary Softech , India June 2015 to December 2016.**

**Role – Java Developer.**

**Responsibilities:**

* Used WSDL and SOAP for the development of the XML based applications.
* Used JAXB for XML marshaling and UN marshalling. Worked with Oracle 10g database.
* Used JDBC to persist Java Objects into the database.
* Involved in writing complex SQL queries and developed Stored Procedures to populate the database.
* Debugged Java classes used to modify web pages such as Business Objects and Data Access Objects.
* Involved in the creation of dynamic web pages with the use of JSP and HTML.
* Involved in daily scrum meetings, worked on the sprint tasks in the Agile Scrum development.
* Used Servlets as an interface between frontend and backend to handle HTTP requests and to send the response back to the front end.
* Utilized various utilities for User Interfaces like JSP, JSTL, JavaScript, HTML, CSS, jQuery, and Ajax.
* Implemented logging for the whole application using Log4j.
* Performed unit testing using JUnit and participated in integration testing.
* Maintained SVN repositories for branching, merging, and tagging.

**Environment**: Java 1.5, J2EE, JDBC, Servlets, XML, JAXB, HTML, CSS, JSP, JSTL, JavaScript, jQuery, Ajax, PL/SQL, Oracle 10g, JAXB, WSDL, SOAP, Log4j, JUnit, SVN.

**Educational Details:**

**University of Massachusetts,** Boston, MAMay 2018

*Master of Science, Computer Science*

**Sreenidhi Institute of Science and Technology,** Hyderabad, TG May 2015

*Bachelor of Science, Computer Science*