

# BIKASH MAINALI

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## FULL STACK DEVELOPER (JAVA/JavaScript/SQL)

Experienced Java/JavaScript full-stack developer with 8 years of extensive expertise serving key role on elite technical teams developing enterprise software for financial, healthcare, apple ad-platform, and e-commerce. Adaptable problem-solver with high levels of skill in Java, Spring, Spring Boot, Hibernate, JavaScript, TypeScript, Angular, Node, Express, Groovy, Python, React, Vue.js, MongoDB, Oracle, Postgres, IBM DB2, PL/SQL, Microservice and Agile/Scrum/Kanban. Strong technical skills paired with business-savvy UI design expertise. Personable team player with experience collaborating with diverse cross-functional teams.

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Java/JavaScript Programming • Advance Software Development • Software Development Lifecycle  
Software Engineering • User Interface Design • Algorithms • Requirements Management • MEAN/MERN Stack

**Languages:** Java, Groovy, Python

**Web:** HTML5, CSS3, Sass, Bootstrap, AJAX, TypeScript, jQuery, Angular, React, Vue.js

**Web Services:** Restful, JSON, Micro-services, AWS

**Web and Application Servers:** JBoss, Apache Tomcat, AWS

**Frameworks:** Angular, Vue.js, Node, Express, Spring (Boot, MVC, Data, Security, AOP, IOC-dependency Injection, Cloud), Hibernate (JPA), Grails

**Databases:** MSSQL, MySQL, Cassandra, PostgreSQL, Oracle, PL/SQL, IBM DB2, MongoDB, RDS, Liquibase

**Design Patterns:** Facade, Singleton, Prototype, Strategy, Template Method, Chain of responsibility, Observer, Builder, Factory, Adapter, Decorator, Proxy, Composite

**SDLC:** Agile/Scrum/Kanban, Waterfall

**Tools:** Git, Atlassian Jira, Apple Radar, Eclipse, IntelliJ IDEA, PyCharm, NetBeans, Maven, Gradle, Postman, Visual Studio Code, Star UML, Docker, Kubernetes, EKS, Rio, Spinnaker, SonarQube, SonarCloud, Opsgenie, Grafana, SCA, SAST, DAST, Jenkins (CI/CD), JMeter, Lacework, ELK

**Platforms:** Windows, Linux, Unix

**Interest:** Data Science & ML, Microservice architecture, Security, Concurrency & Multi-threading, DevOps & Cloud

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## PROFESSIONAL EXPERIENCE

**CHG Healthcare, Utah, US • 07/2024 – Present**

### Senior Software Engineer

Developing and maintaining web application for healthcare professionals.

- Design and develop microservices using Java 21 and Spring Boot, ensuring scalable and maintainable architecture.
- Build responsive front-end interfaces with Vue.js, delivering seamless user experiences.
- Containerize applications with Docker and manage deployments using Kubernetes to achieve high availability and resilience.
- Automate CI/CD pipelines using GitHub Actions, speeding up delivery timelines and reducing manual intervention.
- Monitor and troubleshoot application performance using Kibana/Grafana.
- Proactively resolve production incidents with Opsgenie for alert management, minimizing downtime and ensuring system reliability.
- Redesign key functionalities leveraging Kafka producer and consumer patterns.
- Use Kafka UI to monitor and debug message queues, enhancing the reliability of data pipelines.
- Strengthen security compliance by integrating Lacework.
- Improve code quality with SonarCloud, ensuring compliance with industry standards.
- Actively contribute to rigorous code reviews, promoting best practices across the team.
- Participate in story pre-refinement and refinement sessions for better planning and task prioritization.

- Facilitate agile ceremonies including standups, retrospectives, and feature demos, to align with business goals and gather feedback from the product team.
- Provide on-call support using Opsgenie and Kibana to monitor and resolve production issues promptly.

**Technologies Used:** *Java 21, Spring Boot, JPA, Vue.js, Maven, Microservice, Github Action, Git, SonarCloud, JavaScript, TypeScript, Tailwind CSS, TDD, JUnit, TestContainers, Vitest, AWS, OAuth, Okta, Swagger, Jira, Kanban, Postgres, Kafka, Liquibase, Docker, Kubernetes (EKS), Kibana, Opsgenie, Lacework*

#### **Morgan Stanley, New York, US • 07/2023 – 09/2024**

##### **Java Developer**

Developing and maintaining Enterprise Customer Risk Ranking and other AML/CFT solutions.

- Developed RESTful web services using JAX-RS and Spring Boot and created AutoSys jobs and reports for efficient task automation.
- Designed the UI for the Single Client View (SCV) application and ECRR using Angular 15 with TypeScript, ensuring a user-friendly experience.
- Developed Shell scripts with AutoSys to automate batch processes such as risk calculation, data sourcing, cache loading, I/O monitoring, and table backups.
- Developed Python scripts for I/O monitoring to ensure system performance and reliability.
- Integrated Elastic Search to enable fast search functionality within the SCV application.
- Leveraged Redis Cache to improve application performance and data retrieval times.
- Implemented a Kafka layer between ECRR and a few business units to consume client's inputs and produce calculated risk for those clients and send notification to the different business units.
- Collaborated with cross-functional teams to identify dependencies and ensure consistency across systems and data sources.
- Used SonarQube for code quality analysis and managed databases using IBM DB2, MSSQL, and MongoDB.
- Developed stored procedures and optimized SQL queries to improve database performance.
- Utilized Liquibase for database schema versioning and migration, ensuring smooth transitions between versions.
- Performed unit testing using JUnit and Mockito to ensure robust application functionality.
- Implemented CI/CD pipelines with Jenkins, accelerating deployment cycles and enhancing development efficiency.

**Technologies Used:** *Java 15, Spring Boot, Gradle, Microservice, Jenkins, Git, Bit Bucket, SonarQube, Protobuf, Elastic Search, JavaScript, TypeScript, Angular 15, Material UI, Sass, TDD, Jest, JUnit, AWS, Swagger, Splunk, Grafana, Redis, JFrog, JMeter, Jira, IBM DB2, MSSQL, PL/SQL, AutoSys JIL, Kafka, Liquibase*

#### **ADVANTIS GLOBAL INC.- Client APPLE, Cupertino, California, US • 10/2022 – 02/2023 (short term contract)**

##### **Java Engineer**

Developed services for a seamless experience of advertisement on Apple products.

- Developed and maintained complex business solutions for Apple Search Ads using Java 11, Spring Boot, RxJava, Kafka, and Elastic Kubernetes Service (EKS) for deploying microservices.
- Extensively practiced Test-Driven Development (TDD), writing unit tests using JUnit and TestNG, ensuring at least 80% code coverage for all features.
- Collaborated with cross-functional teams to deliver high-performance, reliable solutions within project timelines.
- Implemented design patterns such as Façade, Singleton, Strategy, Template Method, Observer, Builder, Factory, and Adapter to improve code flexibility and maintainability.
- Utilized SonarQube for code quality analysis and managed databases with Cassandra and Oracle.
- Worked with container technologies like Docker and Kubernetes for streamlined deployment and scalability.
- Implemented CI/CD pipelines using Rio and Spinnaker, resulting in faster, more efficient deployment cycles.
- Utilized Kafka producer and consumer APIs to manage Kafka events, facilitating communication between multiple applications.

- Participated in code reviews, ensuring code quality and adherence to best practices.
- Integrated Swagger2 for simplified API documentation and improved developer experience.
- Used Grafana for distributed system monitoring to ensure operational efficiency.
- Worked within an Agile development environment, contributing to story grooming, estimation, retrospectives, and sprint planning.

**Technologies Used:** Java 11, Reactive Java, Spring Boot, Microservice, Gradle, Kafka, Cassandra, Oracle, Rio, Spinnaker, Git, SonarQube, Grafana, JFrog, Docker, Kubernetes, TDD, JUnit, TestNG, Mockito, AWS, Apache Tomcat, Swagger, Radar

**DEERWALK SERVICES PVT. LTD., Kathmandu, Nepal • 03/2021-10/2021** (short term contract)

Healthcare analytics company based in Lexington, Massachusetts.

**Software Engineer**

Developed and automated core internal product and components.

- Designed and developed microservices for the File Mapper Engine, integrating RESTful APIs, API Gateway, and Spring Security (OAuth2 & JWT), supporting over 500 healthcare organizations.
- Developed RESTful APIs and service interfaces using Spring Boot, RxJava, and Grails, enabling seamless communication with backend systems.
- Built responsive user interfaces with HTML5, CSS3, Bootstrap, JSON, AJAX, Angular 9, and TypeScript.
- Redesigned UI for the File Mapper Engine using Angular Material UI, optimizing performance with lazy loading.
- Mentored junior developers and collaborated with the design team to consult on new features.
- Introduced an intuitive dashboard for data visualization and implemented a Test-Driven Development (TDD) approach for comprehensive unit testing.
- Automated browser testing using Selenium WebDriver, ensuring robust functionality across multiple browsers.
- Integrated Elastic Search with Spring Boot for efficient search functionality, creating DSL queries to optimize DSD file searches.
- Developed custom dashboards in Kibana, visualizing critical metrics such as memory usage, network traffic, and DSD processing performance.
- Utilized Apache Kafka to build real-time streaming data pipelines, enabling asynchronous data exchange between various business applications.
- Engaged in technical documentation, including Technical Design Documents (TDD) based on Software Requirement Specifications (SRS), ensuring alignment with project goals.
- Engaged in pair programming and actively participated in code reviews.
- Set up and managed CI/CD pipelines using Jenkins, facilitating continuous integration and delivery. Integrated SonarQube for ongoing code quality analysis.
- Identified and mitigated security vulnerabilities through Software Composition Analysis (SCA), Static Application Security Testing (SAST), and Dynamic Application Security Testing (DAST).

**Technologies Used:** Java 8, Spring Boot, Microservice, Groovy (Grails), MSSQL, Angular 9, Spring Security OAuth2, JWT, TDD, Selenium, JUnit, HTML5 / CSS3, AWS, RDS, Jira, Tomcat, Jenkins, Swagger, Kafka, Service Discovery, Hystrix, SonarQube, Spring Cloud Gateway, Cloud Config Server, Grafana, ELK, Linux

**DATUM SYSTEMS PVT. LTD., Kathmandu, Nepal • 03/2020 – 03/2021**

IT service provider focusing on anti-money laundering and anti-terrorist financing solutions for financial institutions.

**Java Web Developer**

Developed and tested new APIs; conducted technical troubleshooting.

- Developed and optimized complete anti-money laundering and anti-terrorist financing application and services for Nepal's largest commercial banks.
- Consulted with bank leaders regarding policy/procedure development, risk modeling, API development, and optimization.
- Created RESTful web services for KYC using Spring and Spring Boot.
- Used Spring JDBC Template, JPA and Spring Data MongoDB to work on database operation.
- Created batch files and scheduler to sync customer data between two different data sources.
- Implemented security for API using JWT and Spring Security OAuth2.
- Created user defined functional interfaces, and custom annotations using reflection API.
- Performed unit tests using JUnit & Mockito with TDD principle and BDD tests using cucumber.
- Implemented design patterns like façade, singleton, strategy, template method, chain of responsibility, observer, builder, factory, adapter, proxy.
- Created stored procedures in Postgres to improve query performance.
- Developed UI with HTML5, CSS3, SAAS, Bootstrap, JSON, AJAX, Angular, and Typescript.
- Worked on React to create Controllers that handle events triggered by clients and send requests to server and used Redux for state management.
- Performed browser automation testing using Selenium WebDriver.
- Participated in code reviews.

**Technologies Used:** Spring, Spring Boot, Microservice, Hibernate, PL/SQL, MongoDB, MSSQL, JBoss Server, JavaScript, Angular, React, Selenium, TDD, JUnit, Mockito, JPA, JMS, ActiveMQ, Git, JSON, HTML5 / CSS3, SAAS, Atlassian Jira, Linux

**ISHANI TECHNOLOGY PVT. LTD., Lalitpur, Nepal • 05/2017 – 02/2020**

IT service provider, specializing in Web Services, UI and UX Web, Ecommerce, Mobile Application (Android and iOS).

**Web Application Developer**

Served key role on elite technical team.

- Developed the web tier using JSP, Spring MVC, Spring, Hibernate, and JAX-RS.
- Worked on developing the user interface with Angular, jQuery, AJAX, JSP, HTML/CSS.
- Optimized database and implemented stored procedures in Postgres.
- Involved in Test-Driven Development (TDD) and Unit Testing of various modules using Mockito and JUnit.
- Aided with the launch of a new application and conducted troubleshooting as needed.
- Implemented design patterns like singleton, template method, strategy, adapter (DTO), façade, builder, factory.

**Technologies Used:** Spring Boot, Hibernate, PostgreSQL, TDD, JUnit, Mockito, JBoss Server, Angular, jQuery, JSP, JPA, JSON, HTML / CSS, Git, Linux

## ACADEMIC PROJECTS

### **Badge and Membership System, MIU (2022) • 02/2022 – 04/2022**

Worked with a team of four to create a UML class diagram and developed RESTful API using Pair Programming Technique. Implemented Kafka to send emails to members upon sign up or when membership expiration is close. Conducted CI/CD using Jenkins and used GraphQL for APIs. Wrote unit testing using JUnit and Mockito and analyzed security vulnerabilities using SCA, SAST, and DAST, and addressed them accordingly.

**Technologies Used:** *Spring Boot, BDD, Cucumber, TDD, JUnit, Hibernate, MySQL, Service Registry (Eureka), API Gateway, Kafka, Jenkins (CI/CD), FOSSA(SCA), SonarQube (SAST), OWASP Zap (DAST), JWT & OAuth2, Docker, Star UML*

### **Personal Hobbies Project, MIU (2022) • 05/2022 – 07/2022**

Developed a web application using angular and express framework. Created Restful APIs to create, read, update, and delete hobbies. Implemented security for APIs using JWT and Lazy loading, Authentication Guard, HTTP Interceptor in front-end.

**Technologies Used:** *MongoDB, Express, Angular10, Node (MEAN stack)*

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## EDUCATION

### **Master of Science in Computer Science, 2023**

Maharishi International University, Fairfield, Iowa

**Key Courses:** *Fundamental Programming Practice, Modern Programming Practice, Web Application Programming, Modern Web Architecture, Enterprise Architecture, Algorithms, DBMS, Software Architecture, Web Application Architecture, Advance Software Development, Modern Asynchronous Programming*

### **Bachelor of Engineering in Information Technology, 2017**

Cosmos College of Management and Technology, Lalitpur, Nepal