**NEHEMIAH TEFERA**

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**Senior Software Engineer**

With over 5 years of experience as an accomplished Software Engineer, I've mastered designing, developing, testing, deploying, and maintaining both internal and customer-facing applications using Java, J2EE, Spring Boot, and Microservices. My hands-on experience with Docker, Kubernetes, Kafka, Splunk, JSON, and REST API, combined with my skills in databases like Oracle DB, Cassandra, AWS Aurora along with component testing, contract testing, and performance testing ensures I produce scalable, efficient, and maintainable code. I'm also proficient with AWS services such as EKS, SNS, SQS, EC2, ECS, Lambda, and DynamoDB, and consistently apply TDD and DDD methodologies to ensure top-quality deliverables.

Functional & Object-Oriented Programming • Software Development Lifecycle • Design Patterns

Data Structures & Algorithms • IoC • Team Leadership • Microservices • Cloud/AWS

Front-end & Backend • Authentication & Security • Database Design

**Languages:** Java, JavaScript, Typescript

**Web:** HTML5, CSS3, Bootstrap, Cypress, Jest

**Web Services:** REST, Microservices

**Web/App Servers:** Tomcat, NodeJS

**Frameworks:** Spring Boot, Data, Security, AOP, IoC, Actuator, React.js, ExpressJS, Hibernate

**Databases:** Oracle, MySQL, PostgreSQL, Redis, Cassandra, AWS RDS, MongoDB, DynamoDB

**Design Patterns:** Singleton, Prototype, Observer, Abstract Factory, Strategy, Decorator, Builder

**SDLC:** Agile/Scrum, Waterfall, TDD (Test Driven Development), DevOps

**Tools:** Git, JIRA, Maven, JMeter, JFrog, Postman, Docker, Kafka, Kubernetes, Splunk, Resilience4j

**Platforms:** EKS, MSK, ECS, EC2, Lambda, PCF, Windows, Linux, Unix, Mac OS

**PROFESSIONAL EXPERIENCE**

**iCog-Labs, Addis Ababa, Ethiopia**

Software outsourcing, contracting, and AI research company with multiple global joint projects.

**Senior Software Engineer • 02/2020 – 03/2022**

Designed, developed, and maintained web-based applications.

* + - * Developed, analyzed, and deployed enterprise applications using Node.js and Java.
      * Designed and implemented secure APIs using JWT, OAuth2, and Spring Security for robust authentication, authorization, and data protection consistent with security policies.
* Utilized Apache Kafka as a distributed streaming platform for real-time data processing and event-driven architectures.
* Logged and tracked assigned defects to closure using Splunk and distributed tracing.
* Led a team of 5-person for development of custom RESTful API’s.
* Collaborated with cross-functional team to lead architectural and system design discussions that met both business requirements and technical feasibility.
* Implemented end-to-end tests using Cypress to validate user flows and interactions in a complex React application, ensuring a seamless user experience.
* Developed and implemented user-friendly, responsive, and high-performance web apps using Frontend libraries such as React, Bootstrap, Material Design etc.
* Doubled the application's peak-hour request capacity by implementing a proof-of-concept for asynchronous routing, resulting in 0% downtime.
* Ensured code quality to industry-best practices through comprehensive reviews and mentoring of junior engineers, contributing to their promotions.
* Enhanced application portability, scalability, and deployment consistency using Docker and Kubernetes, leading to increased efficiency and reduced infrastructure costs.

***Technologies Used:*** *Java, Spring Boot & Security, OAuth2, SSO, JavaScript, TypeScript, NodeJS, Express, Cypress, React, Axios, Redux, Splunk, Microservices, CQRS, Event Sourcing, Stream Based Architecture, Event Driven Architecture, DDD, Oracle, Redis, MongoDB, Docker, Jenkins, Swagger, Rest API, Maven, Git, GitHub, JUnit, Mockito, SonarQube, JMeter, JFrog, AWS(EC2, S3, RDS, Lambda, DynamoDB, CloudWatch, API Gateway, CloudFront, EKS, SNS, SQS, ECS and ECR, Step Functions, Cognito*)*, Terraform, Kafka, Kubernetes, CI/CD, JIRA*

**Software Engineer • 01/2018 – 02/2020**

Contributed to design, management, and implementation of various web applications from requirements analysis to deployment.

* Worked closely with cross functional team members to understand complex product requirements and translate them into software designs.
* Extensive knowledge in developing single - page applications (SPA) using React.
* Developed fluent navigation among multiple pages leveraging the power of React Router Dom leading to seamless navigation.
* Spearheaded the engineering of high-standard applications through automated tests improving product code coverage to 90%.
* Designed and Coded flexible, customizable database model and implemented it using Java and SQL queries that optimized software performance by 20%.
* Reduced RESTful API response time by 10% through caching, database query optimization, performance tuning, and efficient algorithmic strategies.
* Participate in requirements analysis, design, and architecture of software applications, collaborating with product owners and stakeholders to ensure alignment with business goals.
* Enhanced application usability and performance by redesigning and modifying numerous software applications and websites.
* Optimized deployment processes by implementing a configuration server and utilizing Git-tracked configurations, mitigating unnecessary rebuilds and deployment rollbacks caused by configuration errors.

***Technologies Used:*** *Java, JavaScript, TypeScript, NodeJS, Express, React, Spring Boot, Microservices, CQRS, Event Sourcing, Event Driven Architecture, DDD, PostgreSQL, Redis, MongoDB, Docker, Jenkins, Swagger, JSON, Rest API, Maven, Git, GitHub, JUnit, Mockito, SonarQube, AWS, Kafka, Kubernetes, CI/CD, JIRA*

**Junior Software Engineer • 01/2017 – 01/2018**

Demonstrated a commitment to continuous learning by acquiring proficiency in various frameworks, tools, and methodologies, emerging as a key contributor to project success.

* Acquired proficiency in tools integral to Agile teams and Continuous Integration/Continuous Deployment (CI/CD) processes.
* Applied the core principle of Object-Oriented Programming. Polymorphism, Inheritance, Abstraction and Encapsulation to develop efficient code.
* Tested functionality to ensure accuracy and speed using Junit and Mockito.
* Used Code versioning with git and GitHub that was integrated to the CI/CD pipeline.
* Collaborated with senior developers to enhance technical skills and contribute effectively to the successful completion of project milestones.
* Developed and maintained Spring Boot applications, implementing robust and scalable solutions in adherence to coding standards and best practices.

***Technologies Used:*** *Java, JavaScript, NodeJS, ExpressJS, OOP, Exception Handling, Hibernate, Spring Boot, PostgreSQL, MongoDB, Maven, Git, IntelliJ, JUnit, SonarQube, Kubernetes, CI/CD, JIRA*

**ACADEMIC PROJECTS**

**IMDB REST Service, MIU (2022):** Created distributed movie review REST service which allows users to view reviews and comments, make favorite lists, and add movies. Registration is required for persistent operations but not to view movies and reviews. ***Technologies Used:*** *Java/J2EE, Spring (Boot, Data, Security, AOP, Dependency Injection, Gateway), Microservices, RabbitMQ, Kafka, Sleuth / Zipkin, Resilience4j, ELK, KeyCloak, Vault, Eureka, MySQL, Docker, Docker-Compose, Kubernetes, Swagger, Postman*

**Personal Website, MIU (2023):** Developed a personal website leveraging a serverless architecture on AWS, as part of hands-on course. The project highlights proficiency in AWS services such as S3, Lambda, SQS, SNS, DynamoDB, Kinesis, and CloudWatch. The website utilizes Lambda functions to process data, SQS and SNS for messaging, DynamoDB for storage, Kinesis for data streaming, and CloudWatch for monitoring and logging. This project demonstrates my ability to design and implement a scalable and responsive web applications using various AWS services and serverless architecture principles. ***Technologies Used:*** *Nodejs, ReactJS, Tailwind CSS, AWS, Lambda, SQS, SNS, Kinesis, CloudWatch, DynamoDB, S3, CloudFront, Route53, ES6, Cognito, API-Gateway*

**Online Bank Application, MIU (2023):** The Online Banking System, built with Java 8, Spring Boot, and React with Redux, follows PMI standards in software engineering. This microservices-based application prioritizes scalability and security, utilizing Spring Security and JWT for robust authentication. The project emphasizes a standardized approach, incorporating features such as Jasper Reports, API Gateway, and Service Discovery for a comprehensive and cutting-edge online banking solution. ***Technologies Used:*** *Java, JavaScript, TypeScript, React, Redux, Microservices Architecture, Spring Boot, Spring Cloud, Spring Data, MySQL, REST API, Axios, Jasper Report, Feign Client,*

**PERSONAL PROJECTS**

**Filoha Health (2019):** Patient record management system for a local church which provides a voluntary free health expo for lower income people. Web application handles patient registration, management, and follow-up tools for doctors, replacing inconvenient paper-based approach. ***Technologies Used:*** *JavaScript, Node.js, Express.js, HTML, CSS, ReactJS, MySQL, Git, Maven, JSON, REST*

**CollabDoc (2023):** Independently developed a collaborative document editing web application using Node.js, enabling real-time collaboration among multiple users like Google Docs. Leveraging Node.js, Express.js, and Socket.io, the application allows users to edit documents simultaneously. MongoDB was used for secure data storage, ensuring scalability, while custom algorithms handled concurrent edits and conflict resolution. ***Technologies Used:*** *JavaScript, TypeScript, Node.js, Express.js, HTML, CSS, ReactJS, MongoDB, Git, JSON, REST, WebSocket, Socket.io, Cypress*

**EDUCATION**

**Master of Science in Computer Science**

Maharishi International University – Fairfield, Iowa

***Key Courses:*** *Fundamental Programming Practices; Modern Programming Practices; Database Management System; Web Application Development; Algorithms; Enterprise Architecture*

**Bachelor of Science in Information System** (2018)

Addis Ababa University – Addis Ababa, Ethiopia