

LEUL TSIGE

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JAVA BACKEND SOFTWARE ENGINEER

Software Engineer with 6+ years of professional experience, including 5 years focused on software development and 1.5 years in systems engineering. Experienced in building and maintaining scalable RESTful APIs, microservices, and enterprise applications across digital payments, enterprise IT, and healthcare. Skilled in improving application scalability, security, and maintainability throughout the software development lifecycle, from requirements analysis and backend design to implementation, testing, and deployment. Proficient in Java, Spring Boot, Spring Data JPA, REST APIs, SQL, Git, Maven, Docker, and microservices architecture.

- Microservices Architecture • Software Development Life Cycle (SDLC) • Performance Optimization and Scalability
- Backend System Design • Database Design and Data Modeling • Secure Application Development

Languages: Java, SQL

Web: HTML5, CSS3, JavaScript

Web Services: RESTful APIs, JSON

Web/App Servers: Apache Tomcat

Frameworks: Spring Boot, Spring Framework, Spring Data JPA, Spring Security, Hibernate

Databases: PostgreSQL, MySQL, H2, MS SQL Server

SDLC: Agile (Scrum)

Tools: Git, Maven, Docker, Postman, IntelliJ IDEA, VS Code, JUnit

Platforms: Windows, Linux

Application/Software: MuleSoft Anypoint Platform, Anypoint Studio

PROFESSIONAL EXPERIENCE

HEALTOPIA, Gambrills, United States • 07/2024 – 01/2026

Healtopia Primary Care is a healthcare provider offering primary care, telehealth, concierge medicine, chronic disease management, and patient-centered medical services.

Software Engineer

- Developed and maintained 8+ Java/Spring Boot microservices for patient management, scheduling, medical records, and healthcare operations, improving scalability and simplifying feature development.
- Designed and documented 25+ RESTful API endpoints and developed MuleSoft integrations using Anypoint Platform to connect microservices, frontend applications, and backend systems, improving data exchange reliability and reducing integration effort.
- Built AI-powered backend services using Java Spring Boot and Large Language Model (LLM) APIs to automate healthcare workflows, improving administrative efficiency and streamlining operational processes.
- Implemented Spring Security with JWT authentication and role-based authorization, securing sensitive patient information across multiple backend services.
- Optimized PostgreSQL database performance using Spring Data JPA, Hibernate, query optimization, and efficient entity relationships, reducing API response times by approximately 25%.
- Collaborated with a cross-functional Agile Scrum team of 6+ software engineers, QA engineers, and product owners to deliver production-ready features during two-week sprint cycles.
- Developed 40+ JUnit test cases and participated in peer code reviews, contributing to improved code quality, reduced regression defects, and stable software releases.

Technologies Used: Java, Spring Boot, Spring Security, Spring Data JPA, Hibernate, RESTful APIs, PostgreSQL, JWT, Maven, Git, Docker, JUnit, Postman.

KLIX TECHNOLOGY, Addis Ababa, Ethiopia • 03/2021 – 02/2024

Klix Technology is a technology company specializing in secure, scalable digital financial solutions and payment systems that support transactions and enterprise services.

Backend API Developer (Java)

- Designed and developed 35+ RESTful APIs using Java and Spring Boot to support secure financial transactions and enterprise payment services.

- Integrated backend applications with internal and third-party systems using MuleSoft Anypoint Platform, enabling seamless and reliable data exchange across enterprise environments.
- Developed business logic for payment processing, transaction validation, account management, and financial service workflows while ensuring data accuracy and system reliability.
- Built reusable backend services and API components that reduced development time and improved consistency across multiple enterprise applications.
- Designed and optimized PostgreSQL and MySQL database queries using Spring Data JPA and Hibernate, improving application performance and transaction processing efficiency.
- Troubleshoot production issues, analyzed application logs, and resolved API integration defects, helping maintain high system availability and minimizing service disruptions.

Technologies Used: Java, Spring Boot, Spring Data JPA, Hibernate, RESTful APIs, MuleSoft Anypoint Platform, Anypoint Studio, PostgreSQL, MySQL, Maven, Git, JSON, Postman, Agile Scrum.

MG ADDIS PLC, Addis Ababa, Ethiopia • 09/2019 – 02/2021

MG Addis PLC is an engineering and technology company providing enterprise IT infrastructure, system administration, and technical support services for business operations.

System Engineer

Enterprise Systems Administration, Infrastructure Support, Database Troubleshooting, Technical Operations

- Engineered and supported enterprise systems and infrastructure supporting day-to-day business applications, maintaining high system availability and operational reliability.
- Diagnosed and resolved 30+ software, infrastructure, database, and system integration issues weekly, minimizing downtime and improving operational efficiency.
- Executed SQL queries and validated database records using SQL Server and MySQL to troubleshoot application issues and maintain data integrity.
- Implemented and maintained enterprise system configurations, access controls, and infrastructure services to ensure secure and reliable access to business applications and resources.
- Supported VMware virtualized infrastructure, analyzing system performance, resource utilization, and availability to maintain reliable application environments.
- Collaborated with application developers and infrastructure teams to troubleshoot production issues, analyze system logs, identify root causes, and resolve backend-related incidents.

Technologies Used: Windows Server, Linux, VMware, SQL Server, MySQL, Active Directory, DNS, DHCP, TCP/IP, Git.

PERSONAL PROJECTS

Electric Vehicle Charging Station Management System (2026): Designed and developed a backend system for managing EV charging stations, ports, user accounts, reservations, and charging sessions. Implemented secure RESTful APIs using Java and Spring Boot with JWT authentication, PostgreSQL persistence, and layered architecture. Designed the system for real-time charger communication and future IoT integration using MQTT, with Docker, Swagger/OpenAPI, JUnit, and Mockito for deployment, documentation, and testing.

Betaide – AI-Powered Domestic Worker Marketplace Platform (2026): Designed and developed an AI-powered marketplace backend connecting domestic workers with employers in Ethiopia. Built a RAG-based matching engine using vector embeddings and pgvector for semantic worker-job matching, alongside voice-first onboarding with speech-to-text and LLM-based data extraction. Implemented AI-assisted document verification, secure JWT-based REST APIs, PostgreSQL persistence, and reactive WebFlux streaming for real-time AI responses. Integrated Africa's Talking for SMS/USSD notifications to support feature-phone accessibility.

EDUCATION

Master of Science in Computer Science

(In progress via distance education; expected completion 06/2027)

Maharishi International University, Fairfield, Iowa

Key Courses: Enterprise Architecture, Web Application Programming, Software Engineering, AI Engineering, Cloud Computing, Algorithms

Electrical and computer engineering in Computer Engineering

Debre Berhan University, Debre Berhan, Ethiopia (07/2019)