

DAWIT WELEGEBRIEL

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SENIOR FULL STACK SOFTWARE ENGINEER

AWS Certified Senior Full-Stack Software Engineer with over 9 years of experience building scalable, secure, cloud-native applications using Java and modern web technologies. Expertise in system architecture, backend performance optimization, and end-to-end platform development. Proven track record of delivering reliable, high-performance systems in healthcare IT, building compliant solutions that support critical clinical workflows and improve patient and provider outcomes. Strong collaborator and analytical problem-solver focused on scalable architecture, system reliability, and continuous improvement.

System Design • Machine Learning & Imaging • Microservices Architecture • Event-Driven Architecture • Caching Strategies • Security • Database Design • Query Optimization • Cloud & DevOps • Unit and Integration Testing

Languages: Java, Python, JavaScript, TypeScript

Web: HTML5, CSS3, JavaScript, RESTful APIs

Web Services: REST, SOAP, GraphQL

Web/App Servers: Apache Tomcat, Nginx

Frameworks: Spring, Spring Boot, React, Vue.js, Flask, Node.js

Databases: MySQL, PostgreSQL, MongoDB, Redis, Cassandra, Noe4j

Design Patterns: Singleton, Factory, Observer, Strategy, MVC, Dependency Injection

SDLC: Agile (Scrum), CI/CD, Test-Driven Development (TDD)

Tools: Hibernate, Spring Cloud, Spring Security, JUnit, GitHub, Maven, Gradle, Docker, Kubernetes, Terraform, Prometheus, Grafana, Postman, VS Code, IntelliJ, Atlassian Suite (Jira), Docker, GitHub Actions

Platforms: Windows, Linux, MacOS

Big Data: Hadoop

CAREER NOTE: Completed on-campus studies and currently taking distance education courses to complete a **Master's Degree in Computer Science** (Available for full-time, W-2 employment).

PROFESSIONAL EXPERIENCE

INBIT - BIOMEDICAL TECHNOLOGY MANAGEMENT, Patras, Greece • 11/2024 – 08/2025

A company which constitutes an initiative for the advancement of the applied field of Biomedical Technology in Greece.

Senior Full-stack Developer

Developing a platform to use AI and Image processing to automate repetitive tasks

- Architected and developed an [AI-driven automation platform](#) using Python (Flask) and Java (Spring Boot) to process and categorize millions of records and images, reducing manual operational effort by approximately 70%.
- Integrated OpenAI and Google Gemini APIs to enable automated data extraction, classification, and semantic analysis, achieving approximately 75% model accuracy and significantly accelerating data processing pipelines.
- Deployed and maintained the platform on Google Cloud Platform (GCP), leveraging cloud-native services for compute, storage, and monitoring to ensure high availability, horizontal scalability, and secure data handling.
- Implemented comprehensive application security practices using Spring Security, including secure authentication and authorization flows, API protection mechanisms, and data encryptions to safeguard sensitive user data.
- Built and maintained CI/CD pipelines using GitHub Actions, automating testing, containerization, and deployment processes, reducing release cycle time and increasing deployment reliability.
- Created technical documentation for databases, backend, and frontend architectures to standardize development practices and improve team onboarding and collaboration.

Technologies Used: Java, Spring boot, Hibernate, Python, Flask, Javascript, Openai API, Gemmini API, PostgreSQL, Redis, AWS, GCP, Maven, Terraform, Docker, Kubernetes, GitHub Actions, Prometheus, Grafana

TWINSOFT TECHNOLOGIES PLC, Mekelle, Ethiopia • 12/2019 – 11/2024

Twinsoft Technologies is a software development company specializing in Healthcare IT.

Full-stack Software Developer

Team Leader, RESTful API Developer, and Frontend Developer using Vue.js

- Integrated machine learning pipelines into backend architecture using Python and the OpenAI API to deliver real-time predictive analytics and intelligent decision-support features.

- Led development of COVID-19 Management Platform for Tigray Health Bureau using Java Spring Boot and Vue.js, enabling real-time case tracking for millions of people
- Built a Laboratory Information Management System (LIMS) for Mekelle University using Java Spring Boot and Vue.js, improving workflow efficiency by 50%.
- Deployed and managed AWS production systems (EC2, RDS, S3, CloudWatch) with CI/CD and auto-scaling, achieving 99.9%+ availability and reducing deployment time by 40%
- Architected a microservices-based system using Apache Kafka for asynchronous service communication to improve scalability, enhance fault isolation, and reduce inter-service latency

Technologies Used: Java, Spring Boot, Hibernate, Vue.js, OpenAI API, Apache Kafka, AWS (EC2, RDS, S3, CloudWatch), Maven, Docker, GitHub Actions, PostgreSQL, MongoDB, Git

MEDCO TECHNOLOGY SOLUTIONS, Mekelle, Ethiopia • 05/2019 – 12/2019

A healthcare IT company transforming the medical industry through innovative and efficient software solutions.

Senior Full Stack Software Developer

- Developed secure RESTful APIs using Java and Spring Boot to power ePrescription and ePharmacy platforms, enabling digital prescription management and pharmacy–patient interactions.
- Built scalable e-commerce modules with React, implementing product catalogs, real-time inventory tracking, order processing, and payment integration for online pharmacy services.
- Designed and optimized MySQL database schemas to improve data integrity and transaction reliability, reducing query response times by 40% for high-volume pharmaceutical transactions.
- Implemented role-based authentication and authorization to protect patient data and ensure compliance with healthcare security standards.
- Developed unit and integration tests using JUnit, increasing test coverage to 80% and reducing production defects by 35%.

Technologies Used: Java, Spring Boot, Hibernate, Spring Cloud, Spring Security, JWT, React, MySQL, JUnit, RESTful APIs, RBAC, Git, Maven, docker, ELK Stack

MEKELLE UNIVERSITY, Mekelle, Ethiopia • 02/2017 – 05/2019

A public research university offering undergraduate and postgraduate programs.

Full Stack Software Developer

- Engineered and deployed an automated café ticketing system using Java Spring Boot and React to streamline student check-ins, increasing entry throughput by 40% and eliminating manual verification.
- Containerized applications with Docker and supported CI/CD pipelines to streamline deployments and ensure consistent environments across development and production.

Technologies Used: Java, Spring Boot, Spring Security, Hibernate, React, MySQL, JWT, JUnit, RBAC, Maven, docker

ACADEMIC PROJECTS

Maharishi International University (2026)

OpsFlow — Real-Time Release Management System: Distributed microservices platform for managing software release workflows using Spring Boot (WebFlux), MongoDB, Apache Kafka, and Docker Compose. Enforce sequential task execution, supports event-driven notifications, and threaded discussions. Features an integrated LLM chatbot (Ollama/LLaMA 3.2) with per-user conversational memory for contextual developer assistance. Includes JWT authentication, an API Gateway with versioned routing, and full observability via Prometheus and Grafana, architected across six independently deployable services communicating via Kafka event streaming.

EDUCATION

Master of Science in Computer Science

(In progress via distance education; expected completion 04/2028)

Maharishi International University, Fairfield, Iowa

Key Courses: Algorithms, Software Engineering, Enterprise Applications, Software Architecture

Master of Science in Biomedical Engineering

University of Patras, Patras, Greece (07/2025)

Key Courses: Advanced Image Processing, Biomedical Image Processing, Bioinformatics

Bachelor of Science in Computer Science and Engineering

Mekelle Institute of Technology, Mekelle, Ethiopia (07/2017)

CERTIFICATIONS

[AWS Certified Solutions Architect – Associate](#)