EDWARD KWABENA TWUMASI

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PROFESSIONAL SUMMARY

Senior Backend Engineer with 6+ years of hands-on experience architecting and deploying scalable, high-performance microservices for enterprise and fintech sectors. Expert in building event-driven systems using Apache Kafka and implementing CI/CD pipelines. Proficient across multiple backend stacks including C#/.NET, Node.js/TypeScript, and Python. Proven track record designing REST APIs, optimizing database performance, and leading technical teams. Actively expanding expertise in Java ecosystem technologies.

TECHNICAL EXPERTISE

Backend Languages & Frameworks: C# & DotNet, Node.js, TypeScript, Python (FastAPI), Java (fundamentals, eager to deepen)

Event -Driven Architecture: Apache Kafka (stream processing, event-driven design)

Cloud & Infrastructure: AWS (EC2,ECR, RDS, S3), Azure, Docker, container management

CI/CD & Deployment: GitHub Actions, Azure DevOps, GitOps, artifact management, environment configuration, release management

Databases & Caching: PostgreSQL, MySQL, Elasticsearch, Redis, MongoDB, query optimization, transaction management, indexing strategies

API Design & Development: RESTful API design, third-party integrations

Testing & Code Quality: Unit testing, integration testing, test-driven development

PROFESSIONAL EXPERIENCE

Lead Backend Engineer | Hubtel, Accra | May 2024 – Present

Government & eCommerce Division | C#/.NET | Apache Kafka | Redis

- Leading architecture modernization of legacy C#/.NET microservices serving 1M+ citizens; redesigned components for improved scalability and latency of sub-400ms
- Developed event-driven payment systems using Apache Kafka, handling 1M+ daily transactions with high availability with 99.99% uptime
- Managed CI/CD workflows using Azure DevOps (release pipelines, environment configuration, artifact management); collaborated with DevOps teams on AWS deployment infrastructure and auto-scaling
- Mentored 8+ junior backend engineers on microservices design patterns, event-driven architecture, Redis caching strategies, and production deployment best practices; led code reviews and architectural planning

Backend Engineer | Hubtel | March 2023 – October 2024

Messaging & Payments Division | C#/.NET | Apache Kafka | Azure DevOps

- Designed elastic payment microservices using C#/.NET and Apache Kafka; processed 1M+ daily transactions with comprehensive audit logging, error handling, and sub-500ms API latency

- Optimized database queries and implemented Redis caching strategies, achieving 45% reduction in API latency and 3x improvement in throughput for critical payment endpoints
- Developed REST APIs for front-end consumption and third-party payment gateway integrations; implemented secure authentication/authorization patterns and API versioning strategies
- Containerized C#/.NET microservices using Docker; coordinated with DevOps teams on AWS EC2 deployment, health monitoring, and auto-scaling policy configuration

FEATURED PROJECT

REACHY AI – Voice-Enabled Healthcare Platform

CI/CD Pipeline & Cloud Deployment Implementation | Python | FastAPI | Docker | GitHub Actions
- Developed multi-lingual voice platform (English, French, Twi, Hausa) integrating FastAPI backend with real-time speech processing and custom built ASR model
- Engineered automated CI/CD pipeline using GitHub Actions; containerized microservices deployed to AWS ECR and EC2 with blue-green deployment strategy
- Integrated Angular frontend with websocket communication enabling live health monitoring and real-time data synchronization

EDUCATION & CERTIFICATIONS

B.S. Computer Science | Kwame Nkrumah University of Science and Technology (November 2021)

Kubernetes From Basics to Guru: Unit 1 | Coursera (January 2026)

Build a CI/CD Pipeline with Docker: From Code to Deployment | Coursera (January 2026)

Software Secure Coding and Security Techniques | GXT International (May 2023)

Working in Teams: A Practical Guide | edX (August 2025)

Software Development Life Cycle (SDLC) | LinkedIn (January 2023)