

Reginald Kotey Appiah-Sekyere

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PROFESSIONAL SUMMARY

Software Engineer focused on Python backend systems, scalable APIs, and cloud-native infrastructure. Honors CS graduate from NYU Abu Dhabi with experience building **microservices**, **payment integrations**, **distributed retrieval services**, **CI/CD pipelines**, and tested production systems on **GCP**. Strong interest in financial technology, data pipelines, and **reliable systems engineering**.

EDUCATION

New York University Abu Dhabi

Bachelor of Science in Computer Science, Minor in Mathematics

GPA: 3.9/4.0 | Graduated with Honors

Abu Dhabi, UAE

Aug 2022 – May 2026

EXPERIENCE

Founding Software Engineer

Calvyan

June 2025 – Present

Abu Dhabi, UAE

- Built and maintained core backend logic for 7+ microservices using **Python** and **Node.js**, supporting internal APIs, health checks, authentication flows, and reliable service-to-service communication.
- Built a centralized **API Gateway** to handle cross-service communication, implementing rate limiting and token-based authentication to secure internal endpoints.
- Developed **CI/CD pipelines** for automated testing and deployment to **Google Cloud (Cloud Run)**, reducing manual deployment time by 60%.
- Standardized development and production environments with **Docker** and **Kubernetes**, improving deployment consistency across services.

Software Engineering Intern

Buzz Mobility

Apr 2024 – Jul 2024

Abu Dhabi, UAE

- Built **RESTful APIs** and secure webhook integrations for asynchronous payment updates, improving transaction **consistency**, **fault tolerance**, and **reliability** across payment endpoints.
- Wrote comprehensive **unit and integration tests** for the core payment module, reducing production bugs by 15% and securing sensitive transaction data.

Network Engineering Intern

UCC, Network Section

Jun 2023 – Aug 2023

Cape Coast, GH

- Administered campus-wide network infrastructure, utilizing monitoring and logging tools to track real-time traffic, analyze **TCP/IP** anomalies, and proactively resolve **DNS** connectivity issues.
- Troubleshoot **Layer 2/3 routing protocols** and optimized network access controls, identifying and resolving a severe bandwidth bottleneck that previously caused **40%** network degradation during peak hours.

RESEARCH

Comunica Open Source Framework | *TypeScript, Python, Milvus, gRPC, Flask*

June 2025 – May 2026

- Built a custom **vector query source** for the **Comunica** SPARQL engine, connecting **Milvus** semantic search into the query pipeline for federated RDF retrieval at scale.
- Designed a **Milvus-backed retrieval service** with per-component embeddings and adaptive top-*k* search, adding **gRPC streaming** alongside Flask/HTTP so large result sets no longer crash the endpoint under heavy load.
- Implemented the **gRPC client in TypeScript** and **Python servicer** on a shared query core; benchmarked against SPARQL ground truth, reaching **100% precision** and **~98% average recall**.

TECHNICAL SKILLS

Languages: Python, SQL, JavaScript/TypeScript, Java, C++, Go, C

Backend, Data & Cloud: Flask, Node.js/Express, gRPC, Redis, MongoDB, MySQL, Milvus, Kafka, GCP, AWS

DevOps, Tools & Testing: Docker, Kubernetes, GitHub Actions, CI/CD, Pytest, Jest/Vitest, Linux/Bash, Git, Postman

CERTIFICATIONS

- Neural Networks and Deep Learning (DeepLearning.AI)**
- Google Cloud, Core Infrastructure**