EMMANUEL KWABENA ASAMOAH ODURO-OPONG

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PROFESSIONAL SUMMARY

Software engineer and AI engineer with 5 years of Python experience who builds and runs AI products in production. Shipped **Serwaa**, a RAG customer service agent that has answered 567 real customer questions for a Ghanaian skincare brand, and founded **QREP**, a multi-tenant QR and NFC loyalty and review platform for small merchants. Completed remote **data annotation** and **quality assurance** work for Mercor (Project Odin), with **25 approved tasks in 12 days**, an **efficiency score of 100** and an **80% first-pass approval rate**. At GRIDCo, builds secure internal web applications with Django and Vue, including a board governance portal with **role-based access**, **multi-factor authentication** and a **tamper-evident audit log**.

TECHNICAL SKILLS

AI Data & Quality	Data Annotation, Data Labeling (LabelImg, Roboflow), Quality Assurance (QA), Rubric Scoring, LLM Response Evaluation, Fact-Checking, Guideline Adherence, Error Analysis
AI / ML	RAG Pipelines, Hybrid Search (BM25 and Dense), LlamaIndex, Qdrant, Ollama, Embeddings, Chunking Strategy, Prompt Engineering, Production LLM Observability
Computer Vision	YOLOv8 (Ultralytics), OpenCV, Object Detection, Model Fine-Tuning and Evaluation
Languages	Python (5 years), JavaScript, TypeScript, SQL, HTML5, CSS3
Backend	Django, Django REST Framework, FastAPI, Celery, Redis, pytest, Multi-Tenant SaaS Design
Frontend	Vue 3, Quasar, Pinia, React (TypeScript), Three.js, Chart.js, Vitest, PWA
Security	Role-Based Access Control (RBAC), TOTP Multi-Factor Authentication, Tamper-Evident Audit Logging, HMAC Webhook Verification
Databases	PostgreSQL, MySQL, Qdrant, Database Design & Optimization
DevOps & Tools	Docker, Docker Compose, nginx, Gunicorn, TLS (certbot), Linux VPS Administration (UFW, fail2ban), Git, CI/CD
Video & Docs	DaVinci Resolve, Fusion, Keyframe Animation, Compositing, Lottie, Product Training Videos, User Manuals

PROFESSIONAL EXPERIENCE

Software Engineer
Kumasi, Ghana

Ghana Grid Company (GRIDCo)
January 2026 – Present

- Develop a secure **board governance portal** for directors and the company secretariat, with a Django REST Framework backend on a 36-table MySQL schema covering meetings, board papers, e-voting, minutes and a decision register.
- Implemented **role-based access control** for 5 roles, **TOTP multi-factor authentication** with step-up checks before votes, and a **tamper-evident audit log** with chain integrity verification.
- Built the portal's Quasar and Vue 3 front end with Pinia stores and offline PWA support, with route guards that mirror the backend permission classes.
- Fixed core bugs in a staff activity logging and reporting app built on Vue 3 and Django, including a silent data loss bug that saved every staff reflection as an empty string.
- Moved the app's AI report writing to a local **Ollama** model so report data never leaves company machines, and produced a 16-chapter narrated training video and a user manual.
- Support the senior developers on the company's RAG system, drawing on production experience from Serwaa, and build 3D monitoring dashboards with Three.js for grid operators.

AI Training Specialist, DaVinci Resolve on macOS
Remote

Mercor – Project Odin (Contract)
October 2026 – November 2026

- Completed **25 approved tasks in 12 days** before the client paused the project, with **20 approved on first submission** (80% first-pass approval rate).
- Reached an **efficiency score of 100**, above the 90 needed for the top **Super Writer** tier.

- Recorded expert-level DaVinci Resolve and Fusion workflows on macOS, narrating each decision in real time to produce high-quality **AI training data**.
- Followed detailed guidelines and **scoring rubrics**, and self-reviewed every task with **quality assurance** checks before submission.

KEY PROJECTS

Serwaa – AI Customer Service Agent (AshkopAI) *Live in production*
Solo developer, client work for Skin Gourmet *June 2026 – Present*

- Built and shipped a production AI shop assistant for a Ghanaian skincare brand that has handled **273 conversations** and **567 real customer questions** across two storefronts.
- Designed **hybrid retrieval** that combines dense embeddings with BM25 keyword search over a 143-chunk product lookbook, with a fixed chunk and character budget so prompts cannot silently grow.
- Logged context size, prompt size, latency and outcome for every chat turn, which gave the brand its first view of what shoppers actually ask in their own words.
- Deployed and administered seven Docker containers on one 8 GB Hetzner VPS, with local embeddings so retrieval costs nothing per query.

QREP – QR and NFC Review and Loyalty Platform *qrep.ashkopai.com*
Founder and lead developer *Ongoing*

- Founded and built a multi-tenant Django platform where scanning the QR code or tapping the NFC tag on a printed card opens a hub with up to five modules: rewards, Google review, menu, Wi-Fi and private messaging.
- Engineered a Pillow and segno pipeline that rendered **534 print-ready cards** onto A4 sheets and decoded every QR code from the finished sheet to catch wrongly encoded cards.
- Designed a loyalty system with per-channel consent records and counter redemption, and enforced Google's review-incentive rules in the code and its tests.
- Maintained about **650 pytest tests** across 40 modules and deployed with Docker behind nginx on a Hetzner VPS.

EDUCATION

BSc Computer Science *Kumasi, Ghana*
Kwame Nkrumah University of Science and Technology (KNUST) *Graduated December 2025*

Capstone: PPE Detection for Construction Sites

- Hand-labeled over 500 site images in LabelImg and managed the dataset in Roboflow to detect helmets, gloves, goggles and boots, along with their absence, across 9 classes.
- Fine-tuned a YOLOv8 model that reached a validation **mAP@50 of 0.53** across 9 classes after only 20 epochs of CPU training, with precision of 0.65 and recall of 0.49.
- Served the model through FastAPI with image upload and a live webcam stream, saving a timestamped face capture to a violations gallery whenever a worker was missing equipment.