

OLUWADAMILOLA O. ONASANYA

Software Engineer | AI Engineer | ML Engineer

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PROFILE

First-Class Computer Science with AI graduate (UWE Bristol) and MSc Information Technology student who builds and ships production AI and full-stack systems. Currently engineering NDPR-compliant clinical AI platforms (Next.js, NestJS, RAG with Ollama and Qdrant) at the Public Health Bureau, with a 100% test pass rate and zero sensitive data leakage. Delivered ML and automation solutions for 10+ freelance clients and won 1st place at a solo-entry hackathon. Seeking graduate and internship roles in software engineering, AI engineering and machine learning.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Java, C/C++, SQL, R
Software Engineering: Data Structures & Algorithms, Object-Oriented Programming, REST APIs, Next.js, React, NestJS, Node.js, FastAPI, Git, CI/CD (GitHub Actions), Docker, Integration & End-to-End Testing, Test Automation
Data & Cloud: AWS, PostgreSQL, Redis, Qdrant (SQL, NoSQL and vector databases)
AI/ML: PyTorch, TensorFlow, Hugging Face Transformers, scikit-learn, XGBoost, RAG, Vector Search & Embeddings, LLMs (Llama 3.2, OpenAI API), AI Agents & Tool Use (LangGraph), Prompt Engineering, NLP, Computer Vision, Feature Engineering, Model Fine-Tuning, Model Evaluation, SHAP, Grad-CAM
MLOps & Compliance: MLflow, Model Serving (FastAPI, Ollama), Drift Detection, Data Privacy & Compliance (NDPR)

EDUCATION

MSc Information Technology, *University of the West of England, Bristol* Sep 2026 – Present
BSc Computer Science with Artificial Intelligence (First Class Honours), *UWE Bristol* Sep 2023 – Jul 2026
Dissertation: Nourish Neural, a full-stack AI platform for household food waste reduction (98% ML ensemble accuracy).

EXPERIENCE

Full-Stack AI & Systems Engineer, *Public Health Bureau* May 2026 – Present

- Engineer Next.js (TypeScript) and NestJS portals with human-in-the-loop review pipelines, so every clinician training credential gets manual clinical advisor sign-off
- Optimise offline-resilient local RAG search (Ollama, Qdrant, live PubMed API fallback) giving clinicians fast access to medical guidelines
- Built a local de-identification pre-processor that redacts patient PII before external API routing, with zero sensitive data leakage and 100% NDPR compliance
- Write Python and Node.js end-to-end integration tests for real-time database calculations, sustaining a 100% pass rate
- Optimise performance, upgrade dependencies and prepare the architecture for production scale

AI, Data & Software Developer (Freelance), *Fiverr* Aug 2025 – Present

- Delivered AI-powered tools and automation for 10+ e-commerce, professional services and retail clients, improving operational productivity by 40% on average
- Shipped ML models and chatbots: sentiment analysis engine (60% faster complaint response), sales forecasting (35% better inventory accuracy), recommendation engine (28% conversion uplift), AI assistant automating 80% of customer enquiries

PROJECTS

Nourish Neural | *Full-stack AI food waste platform (dissertation)* | github.com/Damzy-23/NourishNeural

- Owned the full ML lifecycle: data generation, feature engineering, model selection and evaluation of a heterogeneous ensemble (Random Forest, Gradient Boosting, Neural Network) at 98% accuracy, plus a MobileNetV3-Large food recognition model (94.9%)
- Built a Llama 3.2 ReAct agent with RAG and 5 pantry-aware tool calls, keeping all inference on-device for privacy; validated with 19 automated end-to-end tests (100% pass), ablation analysis and a SUS usability score of 81.3 ("Excellent")

AgriSense | *AI crop intelligence platform*

- Fine-tuned ResNet-50 (92%+) with Grad-CAM, built an XGBoost yield predictor with SHAP, and a LangGraph agent with 6 tool calls and RAG over the CABI knowledge base; MLOps pipeline with MLflow, drift detection, CI/CD and AWS

SatSignal | *Satellite telemetry anomaly detection (in development)*

- LSTM autoencoder and Isolation Forest baseline for anomaly detection on NASA/ESA spacecraft telemetry (92%+ detection accuracy), with a natural language query interface via RAG and FAISS

ACCOMPLISHMENTS & LEADERSHIP

- President, AI Innovators Society, UWE Bristol (2025 – 2026):** led an 8-person committee and ran AI hackathons, workshops and speaker events for 100+ student members.
- 1st Place, RUNCHOW Hackathon (Nov 2025):** solo developer, beat full teams by building a complete AI platform in 6 hours.
- Google DeepMind x Cactus Hackathon, UCL East (Feb 2026):** designed parallel race routing (on-device vs cloud), evaluated on F1, latency and efficiency.
- Recognition, JellyFaaS AI Hackathon (Nov 2025):** Dependency Watcher, an agentic real-time security intelligence tool.
- Student Career Coach and PAL Leader, UWE Bristol (2024 – 2026):** coached students on SWE, data and AI applications; led weekly Python and DSA sessions, lifting engagement by 30%.