

OLUWADAMILOLA O. ONASANYA

Software Engineering | AI & Machine Learning | Data Science

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PROFILE

First-Class Computer Science with AI graduate (UWE Bristol) and MSc Information Technology student with production experience across software engineering, AI/ML and data science. Currently building NDPR-compliant clinical AI systems (Next.js, NestJS, RAG) at the Public Health Bureau, after delivering ML and data solutions for 10+ freelance clients. Hackathon winner and society president who leads teams and explains technical work clearly. Seeking internships and graduate roles in software, AI/ML and data.

TECHNICAL SKILLS

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

AI/ML: PyTorch, TensorFlow, Hugging Face Transformers, scikit-learn, XGBoost, RAG, Vector Search & Embeddings, LLMs, AI Agents (LangGraph), Prompt Engineering, NLP, Computer Vision, Model Evaluation, SHAP, Grad-CAM

Data: Pandas, NumPy, EDA, Data Cleaning & Preprocessing, Statistical Analysis, A/B Testing, Time-Series Analysis, Feature Engineering, Data Pipelines (ETL), Matplotlib, Seaborn, Plotly

Cloud, Databases & MLOps: AWS, PostgreSQL, Redis, Qdrant, MLflow, Model Serving, 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, PubMed API fallback) giving clinicians fast access to medical guidelines
- Refine data-mining algorithms analysing anonymised EMR histories to calculate treatment response deltas, giving clinicians data-driven insight into medication efficacy and side-effect profiles
- 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

AI, Data & Software Developer (Freelance), *Fiverr*

Aug 2025 – Present

- Delivered AI, data and software solutions for 10+ e-commerce, professional services and retail clients, improving operational productivity by 40% on average
- Built a sentiment analysis engine (60% faster complaint response), sales forecasting model (35% inventory accuracy improvement), recommendation engine (28% conversion uplift) and an 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 on 10,000 synthetic samples, plus a MobileNetV3-Large food recognition model (94.9%)
- Built a Llama 3.2 ReAct agent with RAG and 5 tool calls, keeping all inference on-device for privacy; validated with 19 end-to-end tests (100% pass), ablation analysis and a SUS usability score of 81.3

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 RAG; MLOps pipeline with MLflow, drift detection, CI/CD and AWS

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

- LSTM autoencoder and Isolation Forest for unsupervised 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.
- Tech Volunteer, Tech Nexus (Apr 2026):** delivered a one-month programme on tech fundamentals, data literacy and cybersecurity to 20-25 students, with 100% completion.
- 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%.