

# GREGORY OGBILI

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<https://github.com/gregoryogbili>

<https://newstrack-backend-5rzq.onrender.com/>

<https://newstrack-frontend.vercel.app/>

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## SUMMARY

AI Engineer and Full-Stack Developer with production experience designing, building, and deploying AI-driven applications using Python, TypeScript, Node.js, and cloud platforms. Proven delivery of LLM-powered systems, computer vision solutions, game AI agents, data pipelines, AI microservices, and end-to-end solutions integrating APIs, data pipelines, and scalable infrastructure.

Strong foundation in machine learning, deep learning, statistical analysis, and agile software development. Hands-on experience across generative AI, reinforcement learning, autonomous systems, and 3D game development.

UK-based and contract-ready.

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## TECHNICAL SKILLS

### Programming Languages & Frameworks

- ✓ Python (AI services, data pipelines, ML/DL, automation, computer vision)
- ✓ TypeScript, JavaScript, Node.js (backend APIs, microservices, full-stack development)
- ✓ C# (Unity game development, intelligent agents, pathfinding algorithms)
- ✓ R (statistical analysis, EDA, data visualization)
- ✓ SQL (PostgreSQL), React, Next.js, Flutter (Dart basics)

### AI & Machine Learning

- ✓ Generative AI: LLMs, prompt engineering, API integration (Ollama - LLaMA, Mistral | OpenAI, Anthropic, Hugging Face)
- ✓ Computer Vision: YOLO object detection, real-time video processing, theft detection systems
- ✓ Deep Learning: TensorFlow, Keras, PyTorch (neural networks, CNNs, RNNs)
- ✓ Machine Learning: Scikit-learn, Pandas, NumPy (regression, classification, clustering)
- ✓ AI Orchestration: LangChain, Flowise-style workflows, RAG pipelines, vector search
- ✓ Game AI: A\* pathfinding, autonomous agents, reinforcement learning concepts, Unity ML-Agents

## Data Science & Analytics

- ✓ Exploratory Data Analysis (EDA), statistical modeling, hypothesis testing
- ✓ Feature engineering, data preprocessing, missing data handling
- ✓ Model evaluation: accuracy, precision, recall, F1, RMSE, confusion matrices
- ✓ Tools: Jupyter Notebook, RStudio, data visualization libraries

## Cloud & DevOps

- ✓ Docker (containerized AI services, reproducible environments)
- ✓ Cloud Platforms: GCP concepts (compute, storage, deployment), Render, Vercel
- ✓ CI/CD concepts, Git workflows, environment management, MLOps principles
- ✓ REST APIs, authentication (JWT, API keys), microservice patterns, webhooks

## Game Development & 3D

- ✓ Unity 3D (C# scripting, game mechanics, scene design, UI/UX)
- ✓ AI agents: autonomous navigation, state machines, decision-making systems
- ✓ Pathfinding algorithms: A\*, waypoint networks, graph-based navigation
- ✓ Performance optimization, real-time metrics tracking, 3D asset integration

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## PROFESSIONAL EXPERIENCE

Product Developer/ AI Engineer | GENŌ INTELLIGENTIA LIMITED

2024 – Present | United Kingdom

## AI & Machine Learning Development

- ✓ Designed and deployed production-grade LLM-powered applications integrating OpenAI, Hugging Face APIs, and local inference models (LLaMA | Mistral)
- ✓ Built AI orchestration layers for prompt handling, response evaluation, and workflow automation using LangChain-style architectures
- ✓ Developed Python-based computer vision systems using YOLO for real-time object detection and theft prevention in CCTV feeds
- ✓ Implemented RAG-style pipelines with retrieval and context injection for enhanced LLM responses

## Full-Stack Engineering

- ✓ Built end-to-end full-stack applications using Next.js, TypeScript, Node.js, and PostgreSQL with AI integration at the core
- ✓ Designed scalable backend REST APIs with authentication (JWT), user profiling, and secure API access patterns
- ✓ Containerized services using Docker and deployed to cloud platforms (Render, Vercel) with environment management
- ✓ Managed Git workflows, branching strategies, pull requests, and CI-style development practices

## Data Science & Analytics

- ✓ Conducted full EDA pipelines using Python (Pandas, NumPy) and R for data quality assessment and statistical analysis
- ✓ Built and evaluated machine learning models (regression, classification, clustering) with performance metrics and validation strategies
- ✓ Designed data-driven systems where structured model outputs feed directly into application logic with schema validation
- ✓ Applied MLOps principles: version control, containerization, reproducible environments, and model iteration

## Project Leadership & Delivery

- ✓ Led full delivery lifecycle: requirements gathering, architecture design, implementation, testing, deployment, and iteration

- ✓ Collaborated with cross-functional teams including UI/UX designers, backend engineers, and product owners using Agile methodologies
  - ✓ Delivered features autonomously with strong problem-solving, clean code practices, and stakeholder communication
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## KEY PROJECTS & PROOF-OF-CONCEPTS

### NewsTrac - AI News Intelligence Engine

- ✓ 6-stage development roadmap for AI-powered news aggregation, analysis, and summarization platform
- ✓ Designed LLM integration for RSS content extraction, sentiment analysis, and automated reporting
- ✓ Planned scalable architecture with API-first design for future mobile and web client integration

### Hitched - AI-Powered Matchmaking Platform

- ✓ Full-stack Next.js + Node.js + PostgreSQL application with LLM-powered conversational AI and matchmaking logic
- ✓ Designed stateless REST APIs where user context is injected into LLM prompts to produce structured JSON outputs driving application logic
- ✓ Real-time API integration with foundation models, Dockerized backend, cloud deployment (Render + Vercel)
- ✓ Modular architecture enabling future RAG and vector search expansion

### VisionGuard - AI CCTV & Computer Vision System

- ✓ Python-based YOLO object detection system for real-time theft detection in live camera feeds
- ✓ Custom ML pipelines for video data processing with focus on inference performance and model behavior
- ✓ Designed for cloud model hosting and horizontal scaling with future GCP deployment capability

### Autonomous Waste Collection System - Unity Game AI

- ✓ Built intelligent autonomous agent using C# in Unity 3D implementing A\* pathfinding algorithm from scratch
- ✓ Designed waypoint navigation network (10+ nodes) with graph-based route optimization for waste collection deliveries
- ✓ Implemented state machine architecture for agent decision-making, autonomous navigation, and task completion
- ✓ Developed real-time performance tracking UI (distance, time, speed metrics) with visual feedback systems
- ✓ Integrated 3D assets, environment design, and scripted interactions demonstrating production-ready game development skills

## AI Workflow Orchestration - Flowise & Ollama Integration

- ✓ Visual AI workflow builder connected to backend Node.js APIs for complex prompt chaining
- ✓ Used as microservices layer for connecting prompts, tools, and data sources in generative AI systems

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## EDUCATION

### MSc Artificial Intelligence

University of Wolverhampton, United Kingdom

*In Progress (expected 2026)*

#### *Key Modules:*

- *Intelligent Agents (A\* pathfinding, autonomous systems, Unity game AI)*
- *Machine Learning & Deep Learning (TensorFlow, Keras, neural networks)*
- *Data Science & Statistics (Python, R, statistical modeling)*
- *Generative AI, Computer Vision, Reinforcement Learning concepts*

### B.Sc. Sociology

Ahmadu Bello University, Zaria, Nigeria

*Sep 2008*

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## CERTIFICATIONS

- Certified Scrum Master – The Knowledge Academy, United Kingdom (2024)
  - Project Management for Project Managers – Reed Learning, United Kingdom (2024)
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## ADDITIONAL STRENGTHS

- Strong analytical thinking and problem formulation with attention to code quality and architecture
- Clear communication of technical concepts to both technical and non-technical stakeholders
- Self-directed learner with strong research discipline and ability to rapidly acquire new technologies
- Delivery-focused mindset with professional maturity developed over 10+ years in technical roles
- Agile methodologies, sprint planning, ticket management, and cross-functional team collaboration