

## Enoch Abe Aboluwarin

AI & Machine Learning Engineer | Backend Developer

Ibadan, Nigeria

Email: [abeaboluwarin@gmail.com](mailto:abeaboluwarin@gmail.com), [abeenoch@yahoo.com](mailto:abeenoch@yahoo.com) | Phone: +2347066607704

LinkedIn: [linkedin.com/in/epoch-abe-b223a118b](https://linkedin.com/in/epoch-abe-b223a118b) | GitHub: [github.com/abeenoch](https://github.com/abeenoch)

---

### Professional Summary

Machine Learning and Artificial Intelligence Engineer with extensive experience designing, developing, and deploying end-to-end AI systems. Highly skilled in LLMs, intelligent agents, retrieval-augmented generation (RAG), computer vision, reinforcement learning, and automation pipelines. Backend engineering remains a strong secondary capability enabling full-stack implementation of scalable AI products. Co-Founder and COO of Payvite, with a proven ability to deliver production-ready solutions, optimize infrastructure, and solve complex technical problems across diverse industries.

---

### Professional Experience

#### *Freelance Python Developer & ML Engineer — Remote*

**July 2022 – Present**

- Developed predictive models and performed descriptive analytics for diverse datasets, generating actionable insights for clients.
- Built MapReduce NLP pipelines on Hadoop for high-efficiency word frequency analysis and large-scale text processing.
- Integrated large language models (LLMs) into production systems in collaboration with multi-disciplinary teams.

#### **Custom Object Detection and Tracking:**

- Trained custom YOLO models for multi-class vehicle detection.
- Built a multi-lane vehicle tracking and counting system for real-time traffic analytics.

#### **Reinforcement Learning and Retrieval-Augmented Generation (RAG):**

- Developed a complete RAG pipeline including RLHF, SFT, reward modeling, and deployment on Hugging Face.
- Implemented cloud-based RAG on Paperspace and AWS EC2 for scalable inference.

#### **Optimization of Object Sorting, Tracking, and Paddle Game Analysis:**

- Improved multiple tracking pipelines using DeepSORT, FairMOT, and ByteTrack.
- Engineered an AI system for live paddle game analysis (ball tracking, shot detection, re-ID, gender detection).
- Trained LA Transformer re-ID models and YOLO models for multiple detection tasks.

- Created modular Dockerized services for open-source and closed-source components.
- Built internal APIs for video recording, dataset generation, and camera validation.

#### **AI Storyboard Video Generation Pipeline:**

- Built T2I, I2I, and 3D asset pipelines using ComfyUI, Tripo SR, Gaussian Splatting, Hunyuan 3D, and Plan2Scene.
- Developed API endpoints for all workflows and implemented Blender bpy scripts for .glb scene generation.

#### **Agent ERP System:**

- Deployed and configured multiple services via Docker (Postal, Chatwoot, Chartbrew, OsTicket, Documenso).
- Integrated SMTP, S3-compatible storage (Garage, Minio), and API proxies.
- Configured Higgs Audio (TTS/STT) and Voxtral for agent automation on AWS EC2.
- Set up Qwen Coder for code generation features.

#### **bCompetitive (Scraping, Automation, AI Integration)**

[\(https://www.bcompetitive.ai/\)](https://www.bcompetitive.ai/)

- Designed and rebuilt browser automation strategies for Wayfair, Build.com, and Amazon scraping.
- Fixed the Recommended Price API pipeline by correcting malformed Celery → API request formatting.
- Currently building a Product Fetch API with improved normalization, caching, and scalable endpoints.

---

#### [\*\*Machine Learning/AI Engineer — Cereus EdTechnologies \(Remote/Part-time\)\*\*](#)

#### **March 2024 – Present(https://cereus technologies.com/)**

- Built, maintained, and optimized RAG systems for multiple client use cases.
- Integrated ML solutions into production environments using REST APIs.
- Contributed to research, architecture design, and prototyping of new AI features.

---

#### [\*\*Machine Learning Research Assistant — FUTO\*\*](#)

#### **October 2022**

- Researched feature extraction methods with a focus on Local Binary Patterns (LBP).
- Preprocessed and analyzed the PlantVillage dataset for classical ML workflows.
- Evaluated LBP performance across classifiers in a team research setting.

***Machine Learning Engineer & Technical Writer — AlphaWorld, Dubai (Remote)***

**December 2022 – October 2023**

- Developed recommendation algorithms for a social media platform.
- Authored technical documentation (SRDs, PRDs).
- Supported backend teams in algorithm deployment and pipeline optimization.

---

***Co-Founder & COO — Payvite, Lagos, Nigeria***

**September 2023 – Present**

- Co-founded and led development of fintech platform enabling secure cross-border payments.
- Integrated payment gateways and improved system reliability and scalability.
- Managed product design, engineering workflows, and day-to-day business operations.
- Achieved over \$20k in processed transactions within the first 5 months.

---

**Projects**

***Kontext Meeting Agent***

- Built an AI-powered meeting assistant capable of:
  - Recording meetings in real time
  - Generating concise meeting summaries
  - Sending structured summaries to teammates and Notion pages on request
- Implemented using FastAPI, WebSockets, LLMs, and long-context memory structures.

***Paylio (Fintech Web App)***

- Developed using Django REST Framework and PostgreSQL.
- Implemented real-time notifications, multi-user roles, and request-money features.

***Home Assistant Robot***

- Built a four-wheeled autonomous robot using YOLO for object detection and voice commands.

***AI Agent for Blockchain and Crypto Tasks (Eclipse Agent)***

- Developed with LangGraph, FastAPI, and Streamlit for multi-tool autonomous operations.
- Supports coding tasks, Base Network operations, and intelligent workflow execution.

---

## Education

### **Bachelor of Science in Mechanical Engineering**

Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria

**April 2017 – August 2024**

---

## Skills

- **AI & Machine Learning:** LLMs, RAG, NLP, Computer Vision, Reinforcement Learning, Deep Learning, Transformers, 3D Generation
- **Frameworks & Tools:** PyTorch, TensorFlow, LangChain, LangGraph, FastAPI, Django, ComfyUI, Blender (bpy), Hadoop
- **Backend & API Development:** REST APIs, Serverless Architecture, Microservices
- **MLOps:** AWS EC2, Runpod, Docker, Cloud Deployment
- **Data Analysis:** NumPy, Pandas, Matplotlib, Seaborn
- **Database Management:** PostgreSQL, MySQL
- **Other:** 3D Gaussian Splatting, Texture Synthesis, Object Tracking

---

## Certifications

- Azure AI Fundamentals

---

## Interests

- Blockchain, Music, Fashion Design