

LAWSON EKHORUTOMWEN

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SUMMARY

Full-stack developer and AI engineer, and a final-year medical student. Built and shipped production web and mobile applications (React, Next.js, React Native, Node.js, FastAPI) alongside AI systems built from first principles, not course certificates: a GPT model, TF-IDF retrieval, and a clinical NLP pipeline, all implemented from scratch. Looking for an engineering role to build real things with a real team, with a long-term focus on AI applied to medicine.

EXPERIENCE

Sendpiper — Frontend Engineer

Jul 2025 – Present

Meta-certified messaging automation platform for WhatsApp, Instagram & Messenger · Remote

- Built and maintain the customer-facing web application in React and Next.js, including a drag-and-drop flow builder for automated multi-channel messaging campaigns and a unified inbox for managing WhatsApp, Instagram, and Messenger conversations in one interface.
- Built the contact/audience management and campaign analytics interfaces, giving users visibility into a broadcast pipeline processing 200,000+ messages per day at 99.9% reliability.

PROJECTS

Ground — Full-Stack Medical RAG Assistant

Retrieval-augmented generation system answering health questions using only cited MedlinePlus sources. TF-IDF retrieval and cosine similarity built from scratch in PyTorch, with a hybrid fallback for corpus-common queries; FastAPI backend, Next.js/TypeScript frontend, deployed on Render and Netlify.

Rave — Food Delivery Platform

Four-part food delivery platform: customer/vendor and rider mobile apps (React Native/Expo), an internal admin dashboard (Next.js), and a shared REST API (Node.js, Express, Prisma, PostgreSQL) handling auth, catalog, orders, and payments.

American Sign Language Translator

Real-time computer vision app translating ASL letters to text/speech and reversing text or voice into animated ASL sequences. MediaPipe hand-landmark extraction streamed over WebSocket to a PyTorch classifier; FastAPI backend, Next.js/React Three Fiber frontend, offline speech-to-text via Whisper.

Clinical NLP Pipeline

Built entity extraction and negation detection for medical text, implementing a NegEx-style algorithm from scratch. Evaluated against ground truth I hand-annotated myself, since no labeled dataset existed for the task.

GPT Language Model from Scratch

Implemented backpropagation, a custom autograd engine, attention, and a full transformer architecture without relying on high-level ML libraries to abstract away the core mechanics.

EDUCATION

Medicine and Surgery

Expected 02/2027

University of Benin (UNIBEN) — Benin City, Edo State

SKILLS

Full-Stack Development React, Next.js, Vue.js, React Native / Expo, FastAPI, Flask, Node.js / Express, PostgreSQL, Docker

AI/ML Engineering Neural Networks (Built from Scratch), Backpropagation & Autograd Engines, Transformer Architecture & Attention, LLM Training (GPT), LoRA Fine-Tuning, Retrieval-Augmented Generation (RAG), Explainable AI (SHAP, Grad-CAM, Integrated Gradients), Clinical NLP & Named Entity Recognition, Computer Vision (MediaPipe, OpenCV), MLOps, PyTorch

Languages Python, TypeScript / JavaScript

Infrastructure AWS, Google Cloud Platform (GCP), Render, Netlify