

Habeeb Owode

Full-Stack Software Engineer & AI Systems Researcher

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SUMMARY

Full-stack engineer and AI systems researcher shipping AI-powered SaaS, fintech, insurtech and e-commerce products for real users, remotely with Nigerian and US-based teams. I build the parts that make software trustworthy: **signed and idempotent webhooks**, **role-based access control**, **background job queues**, **read-only bank connections** and **AI agents with a human in the loop**. Author of two published preprints on **LLM agent reliability** and **review-gated AI architecture**. Software Engineering graduate with a **4.71/5.00 CGPA (top 1%)**, currently going deep on system design and distributed-systems fundamentals.

EDUCATION

Bowen University

B.Sc. Software Engineering, CGPA 4.71/5.00 (Top 1%)

Iwo, Nigeria

Graduated July 2026

RESEARCH PUBLICATIONS & PREPRINTS

- Owode, H. T. (2026). Automatic Action-Dependency Inference for Selective Revalidation of Tool-Using LLM Agents. Preprint, Version 1. Zenodo. [doi:10.5281/zenodo.23363804](https://doi.org/10.5281/zenodo.23363804).
- Owode, H. T. (2026). SEFA: A Review-Gated Architecture for AI-Assisted Financial Budgeting and Expense Intelligence. Preprint, Version 2. Zenodo. [doi:10.5281/zenodo.22881415](https://doi.org/10.5281/zenodo.22881415).

EXPERIENCE

Quicklyster

Software Engineer

Jan 2026 – Jul 2026

Remote

- Each client organization judged AI-reviewed interactions differently, so I built a configurable QA scoring and rules engine in **Next.js**, **TypeScript**, **Node.js**, **Express.js** and **PostgreSQL** with org-specific rubrics, weighted criteria and thresholds, giving every team scores that matched its own standards.
- Scores had to be trustworthy and repeatable, so I orchestrated the AI review flow as a **LangGraph** agent with **structured outputs**, **critical-failure logic** and **deterministic calculations**, so the same input always produced the same, explainable result.
- AI and human reviewers often disagreed, so I built **human-in-the-loop** validation, benchmarking and calibration workflows that keep criterion-level decisions, **raising exact-match scorer agreement by 27%**.
- Teams needed visibility and accountability, so I shipped performance dashboards, reviewer workflows, **audit history** and reporting in **Next.js**, giving managers a traceable record of every review decision.
- Releases needed to be fast and repeatable, so I set up **CI/CD with GitHub Actions** deploying to **AWS**, letting every merge ship automatically.

NSIA Insurance

Enterprise Software Engineer Intern

Mar 2025 – Aug 2025

Lagos, Nigeria

- Customers had no self-service way to buy or manage policies, so I architected and built a customer portal on **Node.js**, **Express.js** and **PostgreSQL** that handles policy purchase and management end to end.
- Long-running work was slowing user requests, so I moved it to **Redis** and **BullMQ** background job queues, keeping the portal responsive under load.
- Internal staff were keying records into the GIT portal by hand, so I built bulk-upload tools in **Next.js** and **React.js**, using **React Query** mutations for reliable, cached API calls, and **cut manual entry time by 75%**.
- Marketing needed faster publishing and consistent branding, so I designed and deployed a corporate blog platform in **React.js** and **Tailwind CSS** and partnered with IT and design teams to roll out a standard email signature system for **300+** employees.

Solar Survey AI

Software Engineer (Remote)

Sep 2024 – Dec 2025

Illinois, USA

- Field technicians lost work in areas with poor connectivity, so I launched an offline-capable **PWA** in **React** and **TypeScript** that **improved field usability by 40%**.
- Technicians couldn't tell whether uploads had landed, so I integrated **WebSockets** and the **Google Maps API** for real-time upload feedback and precise location workflows.

- Admins were managing content by hand, so I built a **React** dashboard with bulk uploads, granular user controls and **automated exports of 400+ images**.
- Stakeholders needed to see projects across regions at a glance, so I engineered an interactive 3D globe explorer in **React**, **Three.js** and **TypeScript** with real-time visualization of solar projects across multiple geographies.

Omo AI

Jul 2025 – Dec 2025

Software Engineer (Contract)

Remote

- Built full-stack product features for an AI-powered marketing analytics platform using **Next.js**, **TypeScript**, **GSAP**, **Zustand**, **Prisma**, **PostgreSQL**, **Docker**, **LangChain** and **Google Cloud Platform**.
- Developed a **role-based admin dashboard** that lets businesses manage users, assign roles, configure permissions and control access to different platform modules.
- Designed and implemented database structures for users, businesses, roles, permissions and settings to support secure multi-role access control and admin configuration.
- Built **authentication**, onboarding, protected route flows and server-side service logic in **Next.js**, enabling secure user sessions and smooth account setup.
- Implemented a dynamic settings module for business configuration, user management, analytics visibility, access control and admin-level customization.

Chef4Me

Sep 2023 – Oct 2024

Frontend Engineer (Remote)

Lagos, Nigeria

- Built a scalable **LMS platform for 1,000+ users**, supporting real-time notifications, course creation, progress tracking and user dashboards.
- Boosted system responsiveness by **70%** through optimized REST API integrations, frontend query improvements and cleaner data rendering patterns.
- Increased website performance and user experience by **80%** through frontend optimization, lazy loading and reusable component architecture.
- Developed admin dashboard features for user management, cart tracking, order management and internal operations.

HNG Technologies

Jun 2024 – Aug 2024

Frontend Engineer Intern (Finalist)

Lagos, Nigeria

- Ranked in the **Top 500 out of 30,000+ participants** in a competitive software engineering internship program.
- Built an e-commerce application integrating the Timbu API with **React**, **Vite**, **TypeScript** and **Tailwind CSS**.
- Developed **DelveFun**, a full-stack language learning platform with authentication, progress tracking and admin course management.

RESEARCH EXPERIENCE

Independent Researcher

2026

LLM Agent Reliability and Selective Revalidation

- Studied whether tool-using LLM agents can infer the state dependencies behind consequential actions and revalidate only those under environment drift, using a deterministic refund benchmark (36 action-bearing captures, 144 matched replay branches).
- Achieved **0.9385 F1** (1.0000 recall) for action-dependency inference; LLM-selective revalidation **prevented 22/22 observed unsafe actions** and cut revalidation reads by **36.9%** versus the full-state baseline.
- Built the pipeline with **TypeScript**, **LangGraph**, **MCP**, **PostgreSQL** and **RabbitMQ**, with deterministic replay and automated evaluation.

PROJECTS

SEFA | *AI Budgeting App – React Native, TypeScript, Node.js, SSE, Mono API* | [Live Demo](#)

2026

- Built a mobile-first AI personal finance app with budgets, bank sync, statement import and spending insights, and a **read-only bank connection (Mono API)** that can sync transactions but never transfer, withdraw or modify an account.
- Built a PDF statement import pipeline (**Node.js**, **PDF.js**, **Azure OpenAI**) that extracts up to **137 transactions**, **detects duplicates** and stages records for review before saving; added an **AI finance assistant** with confirmation-based actions and streaming over **Server-Sent Events**.
- Evaluated on a 300-transaction synthetic benchmark: **99.49%** parser field agreement, **78.40%** clear-category accuracy and **1.000** duplicate-detection F1; published as a preprint.

LUMES | *E-commerce Platform – Next.js, TypeScript, MongoDB, Stripe* | [Live Demo](#)

2026

- Built a production-ready storefront and custom admin dashboard on the **Next.js App Router** with **NextAuth** authentication and **role-based access control**.

- Designed inventory and order lifecycle logic: stock pre-checks before checkout, **idempotent Stripe webhook handling**, **signed webhook verification**, **refund processing** and transactional email through **Brevo**.
- Built a reusable admin product suite with **TipTap**, **Zustand** and **TanStack Query**: rich text, multi-image uploads, coupons, low-stock alerts, multilingual support and currency conversion.

Recipia | *AI Recipe App – Next.js, MongoDB, Gemini API* | [Live Demo](#)
2025

- Built an AI-powered recipe platform on **Next.js** and the **Gemini API** with chatbot interaction, **multimodal input (voice and image)** and personalized recipe discovery.
- Implemented backend and database workflows in **MongoDB** for users, recipe data, personalized dashboards, **role-based access control** and collaborative features.
- Implemented **voice input** with the browser's **Web Speech API** (speech-to-text) so users can talk to the recipe chatbot instead of typing.
- Built **shopping list** features alongside meal planning.
- Integrated the **Google Calendar API** to support real-time meal scheduling and planning workflows.
- Developed responsive dashboards for recipe management, meal planning, reviews and user-specific cooking experiences.

LEADERSHIP & HONORS

Bowen Tech Hub
Feb 2024 – Present

Frontend Dev Instructor
Osun, Nigeria

- Taught HTML, CSS, JavaScript and React to 30+ students and mentored beginners through code reviews and debugging support.

Honors: Top 1% of graduating cohort (Bowen University, 2026); Top 500 of 30,000+ participants, HNG Software Engineering Internship Programme (2024).

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, SQL, HTML5/CSS3

Frontend: React, Next.js, React Native, Electron, Vite, Tailwind CSS, shadcn/ui, TanStack Query, Zustand, PWA

Backend: Node.js, NestJS, Express.js, REST APIs, Webhooks, PostgreSQL, MongoDB, Prisma, Redis, BullMQ, RabbitMQ

Systems: Authentication, RBAC, Background Jobs, WebSockets, SSE, API Design, Database Design, Payment Workflows

AI & Research: LLM APIs, LangChain.js, LangGraph, MCP, AI Agents, Structured Outputs, Benchmark Design, Evaluation and Calibration, Human-in-the-Loop Systems

DevOps & Tools: Git, GitHub Actions (CI/CD), AWS, Docker, Google Cloud Platform, Stripe, NextAuth, Postman, Vercel