ENYINNA NWALA

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PROFESSIONAL SUMMARY

Software Developer with 6+ years of experience designing, optimising, and deploying production-ready solutions across diverse domains, including IoT, EdTech, and enterprise web platforms. Skilled in building scalable systems and currently focused on applying AI and machine learning technologies to enhance usability, streamline performance, and drive productivity at scale.

SKILLS

Programming Languages

JavaScript, Python, TypeScript, Embedded C, C#, C++, HTML5, and CSS3.

Libraries and Frameworks

Node.js, React.js, Next.js, ASP.NET Core, Styled Components, Sass, Express.js, Git, Redux, and GraphQL.

Software Systems and Cloud Services

MongoDB, PostgreSQL, Microsoft SQL Server (Database Administration), Azure, Azure Devops, AWS EC2, Vercel, Firebase, MATLAB, Figma, Microsoft Office, LINUX(Ubuntu), High Performance Computing, CI/CD, NPM, Docker, Kubernetes, and Terraform.

PROFESSIONAL EXPERIENCE

Datheron Limited

Software Engineer — April 2019 – September 2024

- Redesigned **PostgreSQL transaction** workflows in an order management system, eliminating phantom read errors (in inventory reconciliation) and accelerating query performance by 40%, enabling the system to reliably handle numerous concurrent queries with minimal latency.
- Built a distributed caching layer with **Redis and Node.js**, paired with optimised pagination, cutting average response latency by 25% and delivering a smoother experience for thousands of end-users with 1,000+ cache hits/sec in production.
- **Implemented Apache Kafka–based real-time event streaming** to decouple subscription management (built with Azure and ASP.NET) and payment services, enabling reliable asynchronous communication and laying the foundation for a fault-tolerant, event-driven architecture.
- Deployed microservice-based backend solution for an anomaly management system, using **ASP.NET Core, Docker, and AWS,** halving API response times and improving scalability to support 100+ concurrent active users without service degradation.
- Collaborated in an **Agile delivery** model, contributing to sprint planning, code reviews, and **CI/CD pipelines (using GitHub Actions and Docker)**, which reduced release cycles and improved feature rollout speed.

Mavis Computel

Software Engineer — June 2022 – August 2024

- Developed and deployed interactive learning features with **React.js and Redux**, boosting user learning retention by 15% across multiple product deployments.
- Integrated OpenAI's (GPT-4) into the education platform, enabling adaptive, conversational interactions that kept children more engaged and improved overall learning outcomes.
- Optimised front-end performance, reducing loading times by 30% through component refactoring and animation tuning, resulting in smoother experiences across 20+ client deployments.
- Established automated testing workflows with **React Testing Library and Jest**, catching regressions early and ensuring consistently high-quality releases.
- Conducted 12+ structured user testing sessions with educators and students, feeding insights into iterative design improvements that enhanced usability by 20%.
- Actively participated in Agile sprints and daily Scrum ceremonies, collaborating with designers, developers, and product managers to ensure timely feature delivery and incremental improvement.

Innov8 Hub

Embedded Systems Engineer — April 2021 – June 2022

- Led 100+ hours of field research and 40+ farmer interviews in northern Nigeria, gathering requirements that informed the design of IoT-based smart farming solutions.
- Engineered 20+ prototypes, including cloud-connected irrigation controllers, air-quality monitoring systems, and automated mushroom farms, reducing resource waste and showcasing IoT scalability.
- Developed a multipoint automated irrigation system with master-slave architecture, cutting water consumption by 85% and lowering hardware costs by 60%.
- Built and maintained an **internal DSL** in C for hardware prototyping, enabling faster iteration cycles and standardised project scaffolding, which reduced proof-of-concept turnaround time from weeks to days.
- Designed and programmed an autonomous line-following robot (Arduino, C, infrared sensors), winning first place at the Isoilerband robotics competition.
- Implemented adaptive algorithms for real-time environmental sensing, boosting robot speed and efficiency across varying terrains.

CypherCrescent Limited

Applied Mathematics and Software Research Intern — August 2019 – January 2020

- Conducted more than 6 months of in-depth research on software simulation and modelling, finite element analysis, focusing on numerical methods, algorithms, data structures, as well as object-oriented and functional programming principles, leading to enhanced problem-solving and system optimisation skills.
- Implemented an electronic software simulation engine using the element stamp algorithm and a graph network data structure.

EDUCATION

King's College London

MSc Advanced Software Engineering — September 2024 – September 2025

- Master of Science in Advanced Software Engineering: Distinction (Expected).
- Thesis Project: Evaluating Automatic Speech Recognition for Semantic Topic Segmentation in Educational Video Retrieval.
- Skills: Java, Model Driven Engineering (DSML), Python, PEFT, BERT, Nvidia Nemo Toolkit, ASR, Big Data technologies, Software Architectures and Design, Linux, Data Analytics.

University of Nigeria, Nsukka

Electronics Engineering — September 2015 – June 2021

- Bachelor of Engineering: Second Class Honors (Upper Division).
- Thesis Project: Design and Construction of a Sound Detection Notification System for Visitor/Intruder Alert.

PROJECTS

Video Transcription and Segmentation System — Project Link

- Evaluating Automatic Speech Recognition for Semantic Topic Segmentation in Educational Video Retrieval
- Python, React, FastAPI, BERT, Nvidia Nemo toolkit, and OpenAI.

Circuit Analysis and Simulations Engine — Project Link

- Developed using element stamp analysis as an incidence matrix graph.
- Implemented in C#.

Online Order Management System — Project Link

- A store management system for managing small to medium-sized businesses, with advanced business analytics, order and inventory management facilities.
- Built with React.js, ASP.NET, Microsoft SQL Server, AWS S3, Kafka, and Docker.

HOBBIES

- Volleyball: Team captain and part-time student league volunteer coach.
- Table tennis: Runner-up, Oraimo Nigeria's inaugural sports festival.
- Hiking.