

# Chibuike Maduabuchi - Software Design Engineer

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## WORK EXPERIENCE

### INDEPENDENT PRACTICE

#### Software Design Engineer

Remote - Enugu, Nigeria  
Decemeber 2024 - Present

- Designed, built and shipped production web applications end to end using Next.js with React Server Components (RSC) and Typescript, supporting complex user workflows for fintech, ecommerce and healthcare products.
- Built durable front end infrastructure using SSR, SSG, streaming, and smart caching, improving load times by 20 percent plus and maintaining sub 1.2s initial load on low bandwidth devices.
- Led design and implementation of accessible, responsive interfaces using Figma, Tailwind CSS, and Framer Motion, increasing user engagement by 25 percent through clear hierarchy and smooth micro interactions and animations.
- Implemented complex interactive systems including dashboards, filters, modals, and real-time validation using React Hooks and Zustand, reducing UI latency by 30 percent.
- Integrated and managed backend data efficiently with TanStack Query, achieving faster data fetching and zero loading flickers through smart caching and background synchronization.
- Implemented secure authentication with Better Auth and managed data persistence using Neon, Supabase, and Drizzle ORM, enabling reliable sessions, safe schema migrations, and efficient data access.

### KULIPAL TECHNOLOGIES LIMITED

#### Product Designer

Remote - Lagos, Nigeria  
January 2024 - May 2025

- Conducted in-depth user research through interviews, surveys, and usability testing sessions, uncovering key user pain points and behavior patterns that directly informed design decisions.
- Created interactive prototypes in Figma, rapidly iterating on user flows and interface elements based on feedback from both users and stakeholders.
- Led the end-to-end design of Kulipal's Branch Management feature within our mobile app from wireframes to high-fidelity mockups focusing on clarity, accessibility, and minimizing cognitive load.
- Worked hand-in-hand with frontend developers to ensure high-fidelity implementation, maintaining visual consistency and responsive behavior across devices.
- Designed and tested mobile-responsive layouts for core web app features, optimizing for performance and usability across different screen sizes and devices.
- Redesigned key web pages to align with updated user needs and brand direction resulting in improved clarity, engagement, and conversion metrics.
- Designed email notifications with clear hierarchy, responsive formatting, and strong call-to-action elements to increase user interaction and retention.

## SELECTED PROJECTS

[\(Demo Videos\)](#)

### MEDIBRIDGE - AI HEALTHCARE DATA PLATFORM

- Designed and engineered an AI-driven healthcare data system using Next.js and the Vercel AI SDK to convert unstructured medical records from PDFs and scanned documents into structured, clinician-ready patient profiles.
- Built document ingestion and parsing pipelines that leverage AI-assisted extraction to identify key clinical data and expose it through searchable, usable interfaces optimized for clinical workflows.
- Implemented authentication and authorization with Better Auth, ensuring role-based access and data isolation across hospitals.
- Built the full backend using Supabase (Postgres) and Drizzle ORM, implementing secure data models, queries, and persistence for patient records.

### AI POWERED FORM BUILDER

- Built a natural language driven form builder that converts prompts into structured UI schemas and renders production-ready, accessible forms at runtime.
- Implemented with Next.js and React, with a backend powered by PostgreSQL and Drizzle ORM for schema storage, versioning, and form persistence.

### EMAIL AGENT

- Built an AI powered email automation workflow that parses emails, classifies them, drafts replies and supports a human in the loop approval step before sending.
- Implemented with Next.js and the Vercel AI SDK using ToolLoopAgent, with custom tools for parsing, replying and sending. Includes an approval flow and structured output handling for reliable multi step automation.

### AI BILLING PARSER

- Built an AI powered document processing workflow that ingests receipt and invoice files, runs OCR, classifies document types, and extracts structured billing data for downstream use.
- Implemented with Next.js and the Vercel AI SDK using a multi tool agent, with custom tools for OCR, classification, field extraction, and normalization, producing consistent JSON output for reliable automated processing.

### AI-TRANSFORM - BROWSER EXTENSION

- Built a browser extension that extracts live webpage content and transforms it into structured, schema-validated summaries using AI.
- Implemented an end-to-end pipeline with an Express API, Zod schemas, and Vercel AI SDK to generate executive, detailed, or technical summaries, then rendered them in a clean React UI with local caching and offline recall.

## EDUCATION

### BACHELOR OF ENGINEERING - CIVIL ENGINEERING

University of Nigeria, Nsukka

### UI/UX DESIGN COURSE

Checklearn Batch (Experienced)

## SKILLS

- User Research
- Information Architecture
- Wireframing
- Prototyping
- User Experience Design
- User Interface Design
- Product Design
- Visual Design
- Interaction Design
- User Interface Engineering
- Component-Based Architecture
- Responsive Design
- State Management
- Performance Optimization
- Website & Web App Development
- Software Testing & Debugging
- Accessibility
- Version Control

## TOOLS AND TECHNOLOGIES

- Figma
- Adobe Illustrator
- Adobe Photoshop
- HTML
- CSS(SCSS)
- Tailwind CSS
- CSS Modules
- CSS-in-JS
- JavaScript
- TypeScript
- React
- Next.js
- Framer Motion
- Context API
- TanStack Query
- SWR
- Zustand
- Redux
- Node.js
- Express

## FAMILIAR WITH

- Hono
- Sqlite
- Postgres
- Supabase
- Firebase
- Web Sockets
- Unit Testing
- PWA
- SEO
- CI/CD

## CERTIFICATIONS

JavaScript Essentials 1 (JSE) by Cisco Networking Academy in collaboration with OpenEDG JavaScript Institute [\(Link\)](#)

JavaScript Essentials 2 (JSE) by Cisco Networking Academy [\(Link\)](#)