Allen Ojuka

Full-Stack Engineer | Frontend Architecture | AI Agent Systems | UI/UX Design

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PROFESSIONAL SUMMARY

Full-stack engineer and product designer with 7+ years building web products for US-based startups and independent ventures. Own the full path from Figma design system to production TypeScript, React/Next.js and backend code. Built a greenfield accounting and billing engine, AI-agent dashboards and generative UI at a venture-backed supply chain platform, led the console redesign of a serverless PaaS with 150k+ signups, and am now building AVA, an AI agent orchestration platform with human-in-the-loop approvals.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, SQL, C++, HTML5, CSS3

Frontend: React, Next.js, Vue.js, Nuxt.js, Tailwind CSS, shadcn/ui, Zustand, Design Systems, Component Libraries

Backend & Data: Node.js, Express.js, Hono, REST APIs, GraphQL, WebSockets (Ably), PostgreSQL, MongoDB, DynamoDB, SQLite, Prisma, Drizzle ORM, Zod, Graphile Worker (background jobs)

AI & Agents: Agent orchestration, subagent architecture, tool calling, human-in-the-loop approval flows, generative UI, natural-language query interfaces, observability

Integrations & Security: M-PESA Daraja, Twilio (OTP/2FA), role-based access control (RBAC), audit trails

Infrastructure & Process: Docker, CI/CD, Git, GitHub, Bitbucket, Vercel, Render, Cloudflare, GCP, PostHog (product analytics, session recording), Monorepos, Agile/Scrum

Design: Figma, Interaction Prototyping, User Research, Adobe XD

PROFESSIONAL EXPERIENCE

Founder | Fullstack Engineer & Startup MVP Consultant | Afordia Zero (Nairobi, Hybrid)**Feb 2020 – Present**

- Architected and shipped 15+ web applications and custom APIs for early-stage startups using Node.js, React, MongoDB and PostgreSQL, defining technical scope to hit milestone and budget targets and shorten time to market.
- Built e-commerce and fintech products with third-party payment integrations and normalized relational schemas designed to scale with user growth.
- Designed conversion-focused interfaces in Figma that supported customer acquisition funnels and event ticket sales for independent clients.
- Developed curriculum and taught 10+ junior developers Python, UI/UX architecture, and data structures and algorithms as Lead Technical Instructor.

Tech: *React, Next.js, TypeScript, Node.js, Express.js, MongoDB, PostgreSQL, Prisma, Tailwind CSS, Figma*

Frontend Engineer & UI/UX Architect | Manufactured Networks / MFD.AI (Remote, US)**Sep 2024 – Nov 2025**

- Owned product design and frontend architecture for a venture-backed enterprise supply chain platform, taking features from Figma design systems to production code.
- Built a greenfield accounting and billing engine in TypeScript, Prisma and PostgreSQL that gives clients visibility into the work of Penny, the platform's accounting AI agent, and lets them review, approve and edit Penny's work.
- Built a generative UI that lets users ask for data in plain language (for example, "show me pending merchant purchase orders"): an AI agent runs the query and the structured result is rendered as native interface components.
- Architected the sourcing visibility plane and dashboard, showing the sourcing team agent-run vendor pipelines, live workflow stages and ownership, and built the tools the sourcing agents used to persist merchant, vendor, request and quote data, with required-field validation and duplicate prevention.
- Built in-platform PDF generation for invoices, purchase orders and payments, replacing reliance on QuickBooks Online (QBO) and other external tools for document creation.
- Designed and built onboarding for vendors and merchants, simplifying a previously complex process and reducing the cognitive load on new users.
- Built request-aging visualizations that let teams spot and clear bottlenecks in the sourcing pipeline.
- Ran direct production support for enterprise clients: diagnosed workflow edge cases and delivered hotfixes.
- Integrated PostHog session recording and product analytics, using real user sessions to find and fix UX issues and bugs.

Tech: *React, Next.js, TypeScript, Tailwind CSS, Prisma, PostgreSQL, Figma, PostHog, Git*

Lead UI/UX Designer & Frontend Engineer | Cyclic Software / Cyclic.sh (Remote, US)**Jan 2023 – Dec 2023**

- Led the redesign of the web console and onboarding for a serverless cloud PaaS with 150k+ signups and 1M+ deployments, covering onboarding through multi-region deployment dashboards.
- Shipped core interfaces in Figma and Nuxt.js that increased user engagement by ~20% and reduced bounce rates.
- Introduced a mobile-first responsive framework in Tailwind CSS that lifted mobile signups and dashboard usage.
- Refactored a Vue/Nuxt codebase to remove legacy technical debt, and built a component-driven design system that shortened delivery time for new features.
- Improved the marketing site's page performance and SEO by optimizing images and fixing meta tags, using Core Web Vitals metrics as the guide.
- Integrated PostHog for session recording and product analytics, and used what users actually did to find and fix UX issues and bugs.

Tech: *Vue.js, Nuxt.js, Tailwind CSS, Figma, Node.js, AWS, PostHog, Git*

Fullstack Engineer | Nextsoft Enterprises (Nairobi, Hybrid)**Aug 2018 – Apr 2020**

- Shipped React UI/UX optimizations on high-traffic fintech and e-commerce platforms, raising user retention by ~25% and reducing bounce rates.
- Optimized SQL schemas and Node.js services, cutting page load latency by ~40%.
- Co-led a cross-functional squad integrating payment and financial APIs, reducing transaction errors by ~30%.
- Refactored a legacy monolith into modular Express.js microservices, lowering technical debt and onboarding friction.
- Mentored 4 junior engineers on clean architecture and Git workflows, speeding up their onboarding.

Tech: *React.js, Node.js, Express.js, SQL, REST APIs, Git*

FOUNDER PROJECTS

AVA – AI Workforce Orchestration for SMBs | Founder; product, design and engineering**2026 – Present**

- Building an agentic platform where small-business owners deploy AI agents that own operational work, starting with lead qualification and outbound email.
- Designed an orchestrator and subagent architecture: the orchestrator holds business context and mediates with the user, while each subagent is scoped to one capability and isolated from unrelated ones.
- Implemented tool calling and human-in-the-loop approval: runs pause on gated tool calls, resume on approve or reject, and feed the tool result back to the LLM. Added observability, database persistence and integration tests on core execution workflows.
- Built a background job system on Graphile Worker that spawns jobs to execute agent runs, with automatic retries on failure.
- Three companies have expressed interest in beta testing AVA with their marketing workflows.

HighestBidders – Auction Management Platform | Co-founder; design, architecture, full-stack engineering**2026 – Present**

- Built a multi-tenant platform for auctioneers, banks and insurers after embedding in an auction house to map its workflow, replacing a WordPress, spreadsheet and manual-payment process.
- Replaced shared admin logins with read-only principal dashboards using granular RBAC and audit trails for key actions.
- Delivered sub-second live bid updates with Ably; integrated M-PESA Daraja to automate bidder authorization from bid-security payments, and Twilio for OTP and 2FA.
- In pilot testing with an auction-house partner, cut post-auction report turnaround from hours to seconds and reduced manual overhead by ~80%.

Tech: *Next.js, TypeScript, Tailwind CSS, Zustand, Zod, Node.js, Express.js, Prisma, PostgreSQL, Ably, Twilio, M-PESA Daraja*

Earlier projects: Ryze Network (Next.js, MongoDB, Prisma), a knowledge-sharing app; Fyntrax (React, Node.js, Python, MongoDB), a personal finance and investment management app.

EDUCATION

Diploma in Computer Science | University of Nairobi**Conferred Apr 2020**

B.Sc. Computer Science (coursework completed) | University of Nairobi**Through 2022**