

JACKSON MWAKANO MACHARIA

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AI-DRIVEN FULL-STACK ENGINEER | BUILDS INTELLIGENT WEB + AUTOMATION SYSTEMS

PROFESSIONAL SUMMARY

AI-driven Full-Stack Engineer specializing in multi-tenant SaaS and workflow automation. Shipped and scaled platforms to 15K+ users with 99.9% uptime and p95 <300 ms. Boosted release velocity by 60% via monorepo CI/CD and preview environments; improved page performance ~35% (Lighthouse) through caching, image optimization, and bundle trims. Core stack: Next.js/React, TypeScript, Node/NestJS, Prisma, PostgreSQL/Supabase, OpenAI/LangChain. Strengths in secure APIs (JWT/OAuth2, RBAC), reliability, and developer productivity. Targeting Full-Stack/Platform roles building AI-enabled products.

CORE SKILLS

- **Languages:** TypeScript, JavaScript, Python
- **Frontend:** React, Next.js, Tailwind CSS, Bootstrap, Vite
- **Backend:** Node.js, NestJS, Express, Prisma
- **Databases:** PostgreSQL, Supabase, Firebase (Auth, Firestore)
- **Cloud/DevOps:** Docker, GitHub Actions, Vercel, Firebase Hosting, Monorepo (Turborepo)
- **APIs & Architecture:** REST, GraphQL (exposure), Webhooks, Serverless Functions, RBAC, JWT, OAuth2/OIDC
- **AI & Automation:** LangChain, OpenAI API, workflow orchestration, embeddings, tracing
- **Testing & Quality:** Jest, React Testing Library, Playwright (exposure), linting, CI gates
- **Performance:** Caching strategies (Upstash/Redis usage), image optimization, bundle analysis

EXPERIENCE (PRODUCT-LED ENGINEERING)

Lead Engineer & Founder | Nelimac Learning (AI-Powered LMS) | Aug 2025 – Present · Remote

- Architected and launched a multi-tenant LMS (Next.js, TypeScript, Supabase/PostgreSQL, LangChain) that personalizes student content and automates teacher matching; sustained 99.9% uptime with zero-downtime deploys.
- Increased release velocity 60% by implementing monorepo (Turborepo) and CI/CD (GitHub Actions, Docker) with preview environments and automated tests.
- Lifted page performance ~35% (Lighthouse) via caching, image optimization, and bundle analysis; held p95 API latency under 300 ms with Sentry alerts/dashboards.
- Hardened authentication and access control with JWT, OAuth2/OIDC, and RBAC; implemented input validation with Zod.

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- Established quality gates (Jest, React Testing Library) and trunk-based workflows; lowered regression incidents 25 % and accelerated PR cycle time 90 %.

Full-Stack Engineer · Trainswise-AI (formerly Nexus Loop AI) · May 2024 – April 2025 · Remote

- Built modular backend services with NestJS + Prisma and designed PostgreSQL schemas for reliability and developer velocity.
- Led React/Next.js 14 frontend and internal design system; improved performance scores by about 35% and standardized UI patterns.
- Implemented monorepo workflows (Turborepo) and automation pipelines for multi-service deployments; integrated OpenAI-based assistive tools to speed internal developer tasks.
- Added CI gates (lint/tests) and release automation; documented service contracts and API usage.

Cloud & Frontend Developer · Job Connect Platform · Jan 2024 – July 2024 · Personal Project

- Built real-time job-matching dashboards with chat, analytics, and media workflows using React, Vite, Firebase Auth/Firestore, and AWS S3.
- Deployed serverless CI/CD via GitHub Actions for Firebase and functions with zero downtime; matured code quality with Jest/RTL, ESLint, and Prettier.
- Scaled platform to 15,000+ users; achieved 99.9% uptime and about 35% faster load times through bundle trimming, image optimization, and caching.

SELECTED PROJECTS

- AI Agent Sandbox (Next.js + LangChain + OpenAI): multi-agent workflow automation with tracing; demonstrates tool orchestration, retries, and guardrails.
- Zero-Downtime CI/CD Demo (GitHub Actions + Docker + Firebase): matrix builds, secret handling, and blue-green style deploys with preview environments.
- Portfolio with React + Vite: performance-optimized personal site with Framer Motion, Tailwind, routing, and accessibility improvements.

EDUCATION

B.Sc. Computer Science · University of the People (USA) · 2022 – April 2026 - Online · GPA: 3.81/4.0

B.Sc. Statistics · Meru University of Science & Technology (Kenya) · 2018 – 2022 · GPA: 3.11/4.0

Relevant coursework: Data Structures & Algorithms, Database Systems, Distributed Systems, Machine Learning

HIGHLIGHTS

- Scaled platforms to 15K+ users with 99.9% uptime and robust monitoring.
- Achieved about 60% faster deployments via CI/CD and about 35% faster page loads through performance tuning.
- Integrated AI agents and workflows (LangChain, OpenAI API) to automate ops and boost developer productivity.