

KARABO OLIPHANT

Full-Stack Software Engineer

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SUMMARY

Full-stack software engineer experienced in designing, building, testing, and deploying production web applications for South African organisations. Strong in React, TypeScript, PHP, PostgreSQL, Supabase, payment integrations, responsive UI, and deployment. Delivered 10+ client websites and applications, including a PayFast donation platform and a local-first attendance system.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, C#, Python, PHP, SQL, Rust

Frontend: React, Next.js, Astro, Vite, React Router, Tailwind CSS, Framer Motion

Backend: Node.js, ASP.NET Core, PHP, REST APIs, forms, email workflows

Data and payments: PostgreSQL, Supabase, SQLite, local-first storage, PayFast, payment signatures, IPN

Engineering and deployment: Git, GitHub Actions, Docker, Vitest, CI/CD, accessibility, Vercel, cPanel, Linux

EXPERIENCE

System Developer — DynamicDNA

Learnership / Client Delivery · Johannesburg · September 2025–Present

Professional learnership combining structured software development training with delivery of production software for non-profits, schools, agencies, and small businesses.

- Built and deployed **10+ responsive websites and web applications** using React, TypeScript, Astro, Next.js, PHP, and Tailwind CSS.
- Designed and delivered a **PayFast-enabled donation platform** supporting credit card and Instant EFT contributions for a registered South African non-profit.
- Implemented server-side payment-signature generation using PHP-compatible URL encoding and connected donation flows to Supabase.
- Built and deployed a custom PHP booking and email workflow for an artist booking platform on cPanel.
- Refactored EduTrack from a **1,127-line monolith into 26 typed React/TypeScript modules**, adding Vitest coverage.
- Implemented local-first attendance using browser storage, plus CSV import/export, analytics, search, filters, bulk actions, undo, streaks, and dark mode.
- Delivered routes, service sections, case studies, galleries, contact flows, responsive navigation, and branded interfaces across client projects.
- Worked across requirements, implementation, responsive testing, debugging, deployment, and client handover.

SELECTED PROJECTS

Bare JIT — Rust, x86-64

- Built an educational arithmetic JIT compiler with a handwritten parser and machine-code emitter.
- Explored executable memory, x86-64 instruction generation, and low-level runtime behaviour.

Tiny Consensus — Rust

- Built a small Raft-style consensus simulator focused on leader election, replication, and memory-aware design.
- Studied distributed-systems trade-offs and failure behaviour through implementation.

EDUCATION

Level 4 National Certificate — Software Development

DynamicDNA · Johannesburg · September 2025–Present

National Senior Certificate

2021 · Bachelor's endorsement

SELECTED PRODUCTION WORK

Al-Taawun Fi Al — PayFast donation platform with Supabase data flows · altaawunfial.org.za

EduTrack — Local-first attendance application built with React and TypeScript · class-app-alpha.vercel.app

Mpumi Mtsweni — Responsive artist booking website with a custom PHP email handler · mpumimtsweni.co.za