

Ruben Caleb

AI / Full-Stack Developer | AI Integration • Next.js • Supabase • PostgreSQL

Potchefstroom, North West, South Africa • Open to Remote & Relocation

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Portfolio: [devfolio-rv-caleb-v3.vercel.app](#) | GitHub: [github.com/klabruben3](#) | LinkedIn: [linkedin.com/in/ruben-caleb](#)

PROFILE

Full-stack developer specializing in AI-powered application features — document processing, structured outputs, and RAG/embeddings — built on production-grade Next.js, Supabase, and PostgreSQL architecture. Experienced designing systems that turn unstructured input into reliable, application-ready data, backed by secure authentication, Row Level Security, and efficient database design. Comfortable owning the full pipeline: model integration, backend architecture, data modelling, and deployment.

TECHNICAL SKILLS

AI & Data Processing: AI SDKs, Gemini, OpenAI, Groq, Structured Outputs, Document Processing, OCR, Embeddings, RAG

Backend & Data: Supabase, PostgreSQL, Authentication, Authorization, Row Level Security, REST APIs, Server Actions, Realtime Systems, Database Design

Frontend: React, Next.js, App Router, Tailwind CSS, Component Architecture, State Management

Languages: TypeScript, JavaScript (ES6+), SQL, HTML5, CSS3

Tools & Deployment: Git, GitHub, Vercel, VS Code, Figma

EXPERIENCE

Freelance Software Engineer — Buhle Bezwe Early Childhood Development Centre

2024 – Present | Next.js • React • TypeScript • Tailwind CSS

- Designed, developed, and deployed a responsive website for an Early Childhood Development Centre, establishing its first modern online presence.
- Structured the application's data and component layers to allow future expansion into parent and administrative management functionality.
- Worked directly with the client to refine requirements and prepare the application for production deployment.

Live: [buhle-bezwe.vercel.app](#)

SELECTED PROJECTS

Academiq — AI-Powered Academic Workspace

Next.js • React • TypeScript • Supabase • PostgreSQL • AI SDKs

- Designed and developed a full-stack academic workspace centralizing student modules, assessments, marks, academic timelines, calendars, and study workflows on a PostgreSQL data model.
- Built an in-app AI assistant capable of interacting with academic context to support students with questions, study assistance, and academic planning.
- Designed end-to-end document-processing pipelines for extracting assessment information from uploaded academic documents: text extraction, OCR, structured parsing, and assessment-weight detection.
- Integrated multiple AI model providers (Gemini, OpenAI, Groq) and enforced structured AI outputs to reliably transform unstructured academic documents into application-ready data.
- Designed the data layer around embeddings and retrieval patterns to ground AI responses in each student's academic context.
- Implemented Supabase authentication, PostgreSQL data models, Row Level Security, and application-level access-control patterns to keep student data isolated per user.

- Designed the system with performance and database efficiency in mind, minimising unnecessary Supabase requests and separating application state from data requiring persistent fetching.
- Deployed and iteratively maintained the application using Vercel and GitHub.

Live: academiq-nwu.vercel.app

Devfolio — Full-Stack Portfolio & Real-Time Visitor Platform

React • Next.js • TypeScript • Supabase • PostgreSQL • Vercel

- Designed a relational PostgreSQL schema with real-time synchronized data models supporting messaging, chat updates, and visitor presence.
- Implemented dual authentication flows (email/password and anonymous sign-in) secured with comprehensive Row Level Security policies.
- Implemented a Supabase Edge Function to securely validate administrative access codes, keeping privileged verification logic server-side.
- Built real-time backend synchronization for messaging, presence, and chat state across visitor and admin sessions.
- Deployed and maintained the production application on Vercel with GitHub-based automated deployments.

Live: devfolio-rv-caleb-v3.vercel.app | GitHub: github.com/klabruben3/devfolio.rv_caleb-v3

CORE ENGINEERING AREAS

AI Application Integration • Document Processing & OCR • Structured Outputs & RAG/Embeddings • PostgreSQL & Relational Database Design • Supabase & Row Level Security • Authentication & Authorization • Backend & API Architecture • Real-Time Application Architecture • Debugging & Refactoring

EDUCATION

North-West University — B.Sc. Computer Science & Mathematics

Expected Graduation: 2028

Relevant coursework: Programming, Mathematics, Analytical Problem Solving, Physics