

# Jeffrey Moepi

## Full Stack AI Engineer | Python APIs | GenAI, RAG & AWS Cloud Systems

Johannesburg, South Africa | jeffreymoepi@gmail.com | LinkedIn: linkedin.com/in/jeffreymoepi | GitHub: github.com/jeffreymoepi

### PROFESSIONAL SUMMARY

Hands-on full stack developer and AI solutions builder focused on production-grade web applications, secure APIs, cloud integrations, and Generative AI workflows. Strong experience turning business problems into working systems across Next.js/TypeScript, Python API patterns, C#/.NET, PostgreSQL/Supabase, and AWS AI/cloud services. Built AI-enabled and data-heavy products including biometric verification, OCR-based document extraction, tender intelligence, offline-first operations dashboards, and RAG-style knowledge systems. Comfortable working autonomously in hybrid environments, owning architecture decisions, and producing reusable implementation patterns for enterprise use cases.

GenAI Apps | RAG + Vector Search | Python APIs | AWS AI Services | Microservices | Enterprise Security | Full Stack Delivery

### CORE TECHNICAL SKILLS

AI / GenAI	LLM workflows, prompt engineering, structured outputs, tool calling, AI agents, RAG, vector embeddings, knowledge grounding, evaluation mindset
Backend	Python OOP, FastAPI/API design, REST services, microservices patterns, C#/.NET, authentication, secure API design
Data Engineering	PostgreSQL, Supabase, RLS, SQL, ETL-style pipelines, document/text extraction, OCR flows, text-to-SQL patterns
Cloud / DevOps	AWS S3, Rekognition, Textract, Lambda/API Gateway patterns, Bedrock/SageMaker fundamentals, CI/CD, Git, Docker basics; Azure AI exposure
Frontend	Next.js App Router, React, TypeScript, Tailwind CSS, Flutter, dashboard UI, admin portals, API integration
Enterprise Delivery	Multi-tenant SaaS, RBAC, OTP auth, audit-ready workflows, POPIA-aware design, reusable architecture patterns

### RELEVANT AI & FULL STACK PROJECT EXPERIENCE

#### Full Stack AI / Cloud Engineer | IDVerify + Attendance Management SaaS | South Africa 2025 - 2026

- Designed and built a multi-tenant biometric verification SaaS using Next.js App Router, Supabase Auth/PostgreSQL, RLS policies, AWS Rekognition Face Liveness, AWS Textract OCR for South African ID documents, and S3 object storage.
- Implemented secure onboarding, OTP-based email verification, password reset flows, API keys, webhook subscription scaffolding, usage tracking, subscriptions, and role-based admin controls.
- Built cross-device QR verification sessions with short-lived expiry, registration status tracking, face registration, verification endpoints, and document/profile management workflows.
- Produced reusable SaaS architecture patterns across authentication, tenancy, billing limits, storage, auditability, and cloud-based AI verification.

#### AI Application Developer | CV Parsing & Candidate Intelligence Platform | Portfolio / Client-ready build 2025

- Built an AI-assisted CV ingestion workflow for .png, .jpg, .docx, .doc, and .pdf files, using Microsoft/Azure AI-style document extraction concepts and structured information categorisation.
- Designed flows to extract text, classify candidate information into UI sections such as skills, experience, education, and contact data, and prepare the data for search, matching, and reporting.
- Integrated full-stack delivery using a C# backend, Next.js frontend, file upload handling, API orchestration, and structured AI outputs for reliable downstream use.

#### AI SaaS / Data Engineering Builder | Procurement Radar SA - Tender Intelligence Platform | South Africa 2025 - 2026

- Designed a multi-tenant tender intelligence SaaS with PostgreSQL schemas for tenants, profiles, sources, tenders, tender documents, subscriptions, digest runs, plan limits, and crawl frequencies.
- Modelled crawler orchestration, content hashing, category and priority tagging, PDF/document extraction, daily digest workflows, alert subscriptions, and plan-based quota enforcement.
- Prepared AI patterns for tender summarisation, classification, retrieval, email digests, and future RAG-based question answering over tender documents.

#### RAG / Knowledge Systems Designer | SA Law & Government Assistant | AI portfolio concept 2025

- Designed a Retrieval-Augmented Generation architecture for South African legislation, policies, and government PDFs with document ingestion, chunking, embeddings, vector retrieval, grounded answers, and citations.
- Mapped a production-style stack using Python services, PostgreSQL/pgvector-style search, document pipelines, metadata filters, evaluation checks, and secure user-facing Q&A interfaces.

#### Full Stack / Data Systems Developer | Dishaba Mine Performance Dashboard | Offline-first operations app 2025

- Built an offline-first Flutter and Supabase proof of concept to replace Excel-based mining breakdown logs with SQLite local storage, sync services, KPI calculations, and supervisor/admin dashboards.
- Implemented operational analytics concepts including availability, downtime, MTBF, MTTR, Pareto breakdown analysis, CSV export, advanced filters, and clean data-entry flows for low-connectivity environments.

## PROFESSIONAL EXPERIENCE

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**Independent Full Stack Developer / AI Solutions Builder** | KOENENG HUB and  
freelance/project work | Johannesburg / Hybrid

2024 - Present

- Builds web, mobile, AI, and data platforms for South African business, public-sector, education, logistics, tender, compliance, and operations use cases.
- Translates business requirements into database schemas, API contracts, authenticated user journeys, dashboards, admin tooling, technical documents, and investor/client-ready architecture proposals.
- Works across Next.js, TypeScript, C#.NET, Python API patterns, Supabase/Postgres, AWS services, Azure AI services, Flutter, Tailwind CSS, and secure cloud deployment workflows.
- Comfortable owning delivery end to end: discovery, architecture, UX flows, database design, implementation, testing, documentation, and deployment preparation.

## SELECTED ARCHITECTURE STRENGTHS

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**AI Reliability:** Grounded outputs, retrieval design, structured JSON responses, prompt iteration, tool/action planning, human-review workflows.

**Secure SaaS:** Multi-tenancy, RLS, RBAC, onboarding gates, OTP, protected routes, usage limits, audit-ready data models.

**Cloud Integration:** AWS AI/storage services, serverless patterns, API gateways, webhook scaffolds, object storage, environment-driven configuration.

**Data Products:** ETL-style ingestion, SQL schemas, dashboards, KPI calculations, CSV exports, filtering, operational reporting.

## EDUCATION & CONTINUOUS LEARNING

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- AWS Developer Associate preparation, with focus on Lambda, application development on AWS, data stores, and cloud-native deployment patterns.
- Microsoft AI services learning path, including document extraction, AI categorisation, and Azure-based AI application development.
- Ongoing practical learning in Generative AI engineering: RAG, vector databases, tool calling, agents, structured outputs, and evaluation patterns.
- Formal qualification: Advanced Diploma Information Technology, Central University of Technology, 2025.
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## KEYWORDS FOR ATS

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Python, FastAPI, OOP, AI Engineer, Full Stack Engineer, Backend Engineer, Generative AI, LLM, OpenAI, Claude, Gemini, Prompt Engineering, Tool Calling, Structured Outputs, AI Agents, RAG, Retrieval-Augmented Generation, Vector Embeddings, Vector Search, Knowledge Base, Text-to-SQL, PostgreSQL, Supabase, SQL, Microservices, REST APIs, Authentication, Secure Design, AWS, Bedrock, SageMaker, Lambda, S3, API Gateway, Textract, Rekognition, Azure AI, CI/CD, DevOps, Docker, Next.js, React, TypeScript, Tailwind CSS.