Denzel Chingodza

Software Engineer — Backend, Cloud and Applied AI

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PROFILE

Software engineer finishing a BSc in Software Engineering, working across backend systems, cloud infrastructure and applied AI. I build in Python first, define infrastructure as code, and care about systems that are reliable, observable and tested, not just shipped. Currently a Software Engineering Fellow at Funema, working on a production multi-agent AI platform. Focused on evaluation: proving an AI system works instead of assuming it does.

EXPERIENCE

Software Engineering Fellow — Funema

Oct 2026 – Dec 2026

Venture capital, Remote

- Work on Funema's multi-agent AI platform across backend and AI, with a focus on code stability, reviewing AI-assisted code and documentation.
- Designed and built a press-coverage harvest pipeline in Python that finds news about a company, verifies it is the right company using evidence clues, and labels who is speaking (independent press or the company itself).
- Improved results for a test company from 20 to 35 independent stories by adding country-specific news search, while keeping wrong-company matches at zero across test runs.
- Packaged the service with Docker and FastAPI (job queue, health check, JSON results for the platform), backed by 86 automated tests.
- Added a rejection log and run-to-run comparison tooling, turning unclear quality issues into measured, fixable ones.

Mathematics Tutor

Apr 2022 – Oct 2026

Cape Town (4.5 years)

- Tutored high school mathematics across all grades, including NSC Grade 12 exam preparation in Mathematics and Physical Sciences.
- Tutored first-year UNISA Mathematics (2023–2025).

PROJECTS

Sentinel AI

Live GitHub

Serverless uptime monitoring on AWS with an AI incident digest

- EventBridge triggers Lambda checks every 60 seconds; DynamoDB stores state; SES sends alerts; Cognito handles auth; SQS dead-letter queue ensures no check is silently dropped.
- All infrastructure defined in Terraform, reproducible from one command.
- AI layer reads 7 days of monitoring data and returns a plain-English incident digest via an LLM.

Muzezuru

Live GitHub

Shona-language conversational AI

- Fine-tuned BLOOMZ-3B with QLoRA (4-bit) on free compute (Colab, Kaggle, Hugging Face).
- Found and fixed an 84% data contamination issue in the training set.
- Designed a 15-prompt, 7-category evaluation scorecard, since no standard Shona benchmark exists.

ChunkDoc

Live GitHub

RAG document Q&A for medical students, Stellenbosch University Tygerberg campus

- Students spent up to 45 minutes searching a 200-page PDF for one answer; now they get a grounded answer with page-level citations.
- Semantic search with pgvector; answers grounded entirely in the uploaded document.

AI Intelligence Layer

Routes plain-English questions to the right service and returns the answer

SKILLS

Languages	Python, TypeScript, JavaScript, SQL
Backend	FastAPI, Flask, Next.js, REST APIs
Cloud and DevOps	AWS (Lambda, EventBridge, DynamoDB, SES, Cognito, SQS, API Gateway), Terraform, Docker, Vercel
AI	RAG, pgvector, LLM fine-tuning (QLoRA), LLM evaluation, OpenAI API, Hugging Face, LangChain
Practices	Automated testing, infrastructure as code, technical documentation

EDUCATION

BSc Information Technology (Software Engineering)

Graduating Nov 2026

Eduvos, Cape Town

- Cumulative average: 78% — 17 distinctions across 28 modules.
- Highlights: **Data Structures & Algorithms in Python 91%**, Enterprise Python 96%, 4IR Technologies 97%, Operating Systems 92%.

WRITING

The Unlicensed Builder (Medium) — On building with AI, and the gap between shipping output and understanding what you built. Read

What Do We Make of AI, in the Age of AI? (Medium) — A personal resolution on faith, technology, and what it means to build as a Christian believer in this moment. Read