

Tawanda Makunike

Senior Backend & AI Engineer · Python, FastAPI, Distributed Systems & Applied LLMs

Sandton, Johannesburg +27 73 194 6286 tawanda@makunike.com www.makunike.com
linkedin.com/in/tawanike

PROFILE

Senior Backend and AI Engineer with 11+ years designing and shipping production software across startups, consultancies and product teams. I specialise in Python, FastAPI, Django, PostgreSQL and distributed systems, and build production AI with RAG, agentic workflows, structured extraction and human-in-the-loop review. Hands-on from architecture through deployment and mentoring.

11+ yrs

building production software

200M+

emails validated on Kafka

R5M+

installer payments in 6 months

10,000+

judgments in RAG search

EXPERIENCE

Senior Software Engineer

Sep 2025 – Sep 2026

Smart Kitchen Co · Sandton · Remote · Permanent

- Led technical architecture and delivery across ParcelNow, OrderEase and internal ERP and warehouse systems.
- Owned system design across Next.js, FastAPI, PostgreSQL and Redis for high-volume transactional workflows.
- Set Docker-based development and deployment standards, improving environment consistency.
- Technical owner of Mngr, a Laravel ERP: feature delivery, refactoring and production support.
- Led development of a Kotlin picking-and-packing app for warehouse operations.
- Turned product and operational requirements into roadmaps; reviewed code and mentored engineers.

Intermediate Backend Engineer

Jun 2023 – Sep 2025

4-Sure Technology Solutions · Johannesburg · Hybrid · Permanent

- Developed and modernised Python systems for a claims-management platform.
- Contributed to a production Django monolith on PostgreSQL and PostGIS.
- Led planning, architecture and implementation of the move toward independently deployable services.
- Built automation scripts to cut repetitive operational work; reviewed pull requests.
- Worked with product, design, frontend, mobile, data and business-analysis teams in an Agile setup.

AVAILABILITY

Available immediately. Remote preferred; open to hybrid in Johannesburg.

SA spousal visa with work authorisation; no sponsorship needed.

CORE SKILLS

Backend

Python, FastAPI, Django, DRF, Flask, Node.js, PHP/Laravel

Applied AI

LangChain, LangGraph, RAG and Graph RAG, tool-calling and multi-agent systems, structured extraction, embeddings, model routing, LangSmith, Azure OpenAI

Data

PostgreSQL, pgvector, PostGIS, Redis, MongoDB, Neo4j, Elasticsearch, Kafka

Platform

AWS, Azure, Docker, CI/CD, API design, event-driven systems, SSE

Frontend & mobile

Next.js, React, TypeScript, Vue.js, Kotlin, Jetpack Compose, React Native

Leadership

Architecture, technical strategy, mentoring, code review, product planning

EXPERIENCE, CONTINUED

Lead Engineer

Dec 2022 – May 2023

TransAfrica Strategic Advisory · Johannesburg · Contract

- Led platform architecture and engineering for the Joel Transport online booking platform.
- Designed the AWS architecture, chose services and wrote architecture diagrams and specifications.
- Built Python APIs; integrated Paystack, Sage Accounting, Zoho Bigin and Zoho SalesIQ.

Full Stack Python Engineer

Apr 2022 – Dec 2022

Siyavula Education · Remote · Contract

- Built backend features with Python, Pyramid, SQLAlchemy, PostgreSQL and Redis; frontend with React and Sass.
- Designed solutions for complex product requirements, reviewed code and kept production running, including after hours.

Full Stack Engineer

Mar 2021 – Mar 2022

BPOSeats · Remote · Contract

- Built full-stack features with Django, Python and Vue.js: scalable API endpoints and reusable Vue components.

Founder & CTO

Jun 2018 – Present

Mmogo Media · my consulting company · Self-employed

- Architected Joel Transport, eButler and Flemoji; lead engineer for Altur, a WhatsApp-based job platform.
- Moved Harambee Youth Accelerator's user journeys from a mobisite to the WhatsApp Business API.
- Led eButler's WhatsApp commerce channel, with ordering and payment through Flash's 1Voucher.
- Set technical strategy and platform choices for the company and its clients.

Full Stack Engineer

Mar 2019 – Feb 2020

Leadbook · Singapore · Remote

- Built an email validation and verification pipeline that processed more than 200 million addresses.
- Introduced Apache Kafka for asynchronous processing; built APIs with Django, DRF and Flask on MongoDB.

Chief Product Officer

Dec 2018 – Nov 2019

AmalgaNation, Inc. · Pittsburgh, USA · Remote · Part-time

- Designed, built and launched the MVP on Node.js, React, MongoDB and Elasticsearch; led customer discovery.

Software Engineer & Data Analyst

Sep 2017 – Feb 2019

Praekelt (now Helm) · Johannesburg

- Designed web analytics and conversion tracking across MTN digital properties with Accenture and MTN teams.

EDUCATION

Bachelor of Economics

University of Namibia, 2008 – 2013

CERTIFICATIONS

AWS Certified Cloud Practitioner

Amazon Web Services, Nov 2021

Automation Developer Level III

Robocorp, May 2023

EARLIER ROLES

Co-Founder & CTO, BuiSoft

Nov 2014 – Mar 2017

Led two developers; principal backend engineer for eButler, an early SA on-demand grocery platform (Python, Django).

Content Curator, Praekelt

Mar 2015 – Feb 2017

Lead curator for Telkom Group online platforms.

INTEGRATIONS SHIPPED

Payfast, Paystack, Peach Payments, MTN MoMo, Flash 1Voucher, WhatsApp Business API, Infobip, Twilio, Sage, Zoho

SELECTED PROJECTS

Products I founded and built end to end, and production systems shipped for clients and employers.

Pairlypairlyhq.com

Founder / Lead Engineer · Jul 2026 – present

AI-native business OS: tenant-scoped agents, websites and CMS, CRM, newsletters and a skills marketplace. Designed the agent runtime with memory, model routing, typed tools, approval gates and audit trails.

[FastAPI](#) · [PostgreSQL](#) · [Redis](#) · [Next.js](#) · [Azure](#) · [LangChain](#)

CaseNotescasenotes.space

Founder / Lead Engineer · Feb 2026 – present

South African legal research and e-discovery: hybrid search over 10,000+ judgments, a citation graph and 1,624 rubric-scored questions. Five-stage Graph RAG, active learning and an MCP server.

[FastAPI](#) · [pgvector](#) · [Neo4j](#) · [LangGraph](#) · [Azure](#) [OpenAI](#)

Fashionlyfashionly.co.za

Founder / Lead Engineer · Apr 2026 – present

AI styling across web and Android that builds outfits from what users already own. Khanya, a LangGraph stylist with about 15 typed tools, streams grounded product cards over SSE.

[Next.js](#) · [Kotlin](#) · [Supabase](#) · [LangGraph](#) · [MongoDB](#)

WDDNGwddng.co

Founder / Full-stack & Mobile · Jan 2026 – present

Wedding marketplace with two Android apps on Google Play. Thuli, a LangGraph supervisor, coordinates 16 specialist agents with per-agent models, token metering and tracing.

[Next.js](#) · [Supabase](#) · [Kotlin](#) · [Paystack](#) · [LangGraph](#)

ParcelNow & OrderEaseorderease.co.za

Smart Kitchen Co · 2025 – 2026

On-demand parcel delivery with real-time tracking, and branded online ordering for restaurants and retailers: menus, orders, payments and fulfilment.

[Next.js](#) · [FastAPI](#) · [PostgreSQL](#) · [Redis](#)

Multichoice installer payments

Integration engineer

Connected the installer management system to Multichoice's payment process so installers are paid accurately and on time. Processed over R5 million in its first six months.

[Payments integration](#)

CV Coachcvcoach.net

Founder / Lead Engineer

A LangGraph workflow parses a CV and job ad, scores the match and drafts tailored cover letters and CV revisions; a Chrome extension captures job ads.

[FastAPI](#) · [Celery](#) · [Supabase](#) · [LangGraph](#)

Ventawventaw.com

Founder / Lead Engineer

Secure, isolated environments for developer workloads: provisioning, session management and resource monitoring, built for multi-tenancy.

[Next.js](#) · [FastAPI](#) · [multi-tenant orchestration](#)