Emmanuel Mmanda

Software Architect & Integration Engineer

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Portfolio · GitHub / EmmanuelMmanda · LinkedIn / Emmanuel Mmanda

I turn business requirements into applications, connected services and operational systems. My work spans software architecture and implementation, data analysis, communications integration, and the server and network environments that keep services running.

EXPERIENCE

Software Engineer · Flex Corporate Services Ltd (Fléx–CITS)

September 2023–present

Design and develop business applications, backend services and integrations. Work includes healthcare feedback and reporting, communications workflows, and connecting the 199 health call service with Ongea na Waziri wa Afya. Support deployment, troubleshooting and ongoing operation across application and server environments.

Software Engineering Intern · Fléx–CITS

July–August 2023

Supported development and maintenance within a production engineering team, contributing to application work and practical troubleshooting.

Independent software development

2020–present

Build products and undertake client software work across business operations, web experiences, mobile access, data and automation.

EDUCATION

BSc Information System Management

Ardhi University, Tanzania · 2020–July 2023

GPA: 3.7

ENGINEERING EXPERTISE

Applications & architecture. Backend services, API contracts, data modelling, access control and business workflows. Python, Django/DRF, JavaScript, React, PHP and Laravel.

Integrations & communications. REST APIs, SMS, USSD, contact-centre systems and provider connections. Messaging queues, delivery feedback, background processing and monitoring.

Servers & networks. Linux and Windows Server administration, networking, VPN connectivity, virtualization, hosting, deployment and incident troubleshooting.

Data, AI & automation. SQL, PostgreSQL, MySQL, Apache Superset and business intelligence. Private AI assistants, provider connections, tool calling, MCP and application workflows.

Selected work

Applications and integrations shaped around the people using them.

OdaBook / Sales, stock & business management

A web and Android workspace for traders, bringing checkout, inventory, orders, purchases and outstanding balances together. Supports English and Kiswahili, queued offline transactions and OdaAI-assisted drafts that the user reviews before committing.

Afya Maoni & health-service integrations / Professional work through Fléx–CITS

Organizes patient and community feedback into scorecards and reporting across facility, council, regional and national views. Connected communication workflows help teams follow participation, review concerns and plan service improvements.

Flex SMS / Messaging operations & gateway integration

Connects campaign and customer workflows with message routing, queues and delivery reporting. Work spans Jasmin/SMPP, RabbitMQ, Celery and Redis, with operational monitoring through Grafana.

VICOBA USSD / Community finance & mobile access

Gives group members menu-based access to account information, loans, payments and notifications from a basic phone. Brings business rules and service integrations into a short, guided session.

SokoHuru / Market information & portfolio tools

Brings Dar es Salaam Stock Exchange market information, portfolio tracking and simulation into one workspace. Helps users follow holdings and explore scenarios through clear data views.

Extra Mile International / Booking & service operations

Connects guest records, booking confirmations, invoices and email workflows with operational reporting and customer feedback, helping staff work from a shared view of each booking.

MeBot & LunaBot / Assistant workflows & connected tools

Explore useful assistants across Android and Windows: provider connections, context, tool access and MCP integrations. Focus on controlled actions, clear review points and workflows that support the user's task.

Ambureni Coffee Lodge & Global Experience Tours / Hospitality & travel websites

Present accommodation and travel experiences through photography, clear service information and enquiry journeys that help visitors decide what to explore and how to get in touch.

HOW I WORK

I connect the user's workflow to the underlying architecture, then verify critical behaviour through focused checks and review. AI-assisted development supports implementation and investigation; I remain responsible for the decisions, integration boundaries, tests and final user experience.

Explore project workflows, interface demonstrations and technical context in the online portfolio.