

SAILAS SAKALA

ICT Engineer · Software Development · Network & Systems Administration

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PROFESSIONAL SUMMARY

ICT engineer (B.Eng. Computer Science, CGPA 3.7) who builds and supports systems end to end, from production web applications to the servers and networks they run on. Freelance developer since 2024, delivering four client systems for Lusaka businesses, including a smart-meter power distribution platform that bills tenants for the electricity they actually use. Completed the full CCNA curriculum on physical Cisco routers and switches at the University of Zambia, with hands-on lab experience in Active Directory, Group Policy, DNS/DHCP, VoIP (FreePBX), VPNs and network monitoring. Licensed ICTAZ practitioner with strong troubleshooting, documentation and user-training skills.

EXPERIENCE

Freelance Software Developer & IT Support | Self-employed, Lusaka Jul 2024 – Present
Design, build, deploy and support web systems for small and medium businesses using Next.js, FastAPI and PostgreSQL.

Smart Power Distribution Platform | Energy-management client Jun 2026 – Present

- Building a multi-tenant platform that splits power from a primary meter across API-connected secondary smart meters, so each tenant pays for their actual consumption instead of an equal share.
- Implemented role-based access for super admin, admin and tenant users. MVP deployed and currently in client testing.

SME Evaluation Platform | Business-evaluation client Jun – Aug 2025

- Replaced paper-based scoring with a shared web app where evaluators score SMEs on their own devices and every score is visible and editable, removing the need for meetings to reconcile large score differences.
- Took the system from requirements to production in just over a month.

Income & Employee Management System | Multi-location salon & barbershop business Jul 2024 – Mar 2025

- Built a central income and staff system for a business with several shops across Lusaka, replacing the owner's daily drive between shops to reconcile cash (by denomination), mobile money and card takings against each employee's sales.
- Gathered requirements from the owner and staff, trained employees at multiple locations, and provided ongoing support, including fixing data-entry and record errors.

Barcode Inventory System | Same client Feb – Mar 2025

- Co-developed a barcode-scanning inventory system with separate owner and shop (checkout) views, giving per-shop usage visibility to cut stockouts and overstocking.

TECHNICAL PROJECTS

Self-directed labs built for hands-on, production-style experience.

Active Directory, Help Desk & VoIP Lab | Windows Server 2022, FreePBX Aug 2026 – Present

- Deployed a domain controller with AD DS, DNS and DHCP (with reserved ranges for static devices); designed OUs, role-based security groups, and password and account-lockout policies.
- Used Group Policy to map departmental drives and deploy a network printer only to the users who need it; wrote PowerShell scripts for bulk user onboarding and OU placement.
- Ran a help desk workflow with Spiceworks ticketing, PDQ Deploy and PDQ Inventory for software rollout and asset tracking, and remote support over RDP and Windows Remote Assistance.
- Deployed a FreePBX (Asterisk) IP PBX with PJSIP extensions and softphones; diagnosed and fixed a Fail2ban ban that took the phone system offline.

Infrastructure Monitoring Dashboard | Python, FastAPI, SNMP Aug 2026 – Present

- Built a real-time dashboard tracking server health through Netdata, router traffic through direct SNMP polling, and DNS, VPN and Docker service status, with push alerts for critical failures.
- Secured it with single sign-on through Keycloak (OIDC), including full SSO logout.

Self-Hosted Server Infrastructure | Linux, Docker Mar 2025 – Present

- Administer a home server and a public cloud VPS running DNS resolution and filtering (Unbound, AdGuard Home), WireGuard VPN, Caddy reverse proxy with TLS, Keycloak and Netdata, all in Docker containers.
- Deploy and maintain live web services on the VPS, and handle upgrades, backup checks and incident troubleshooting.

- Designed and documented a multi-site LAN-WAN topology with Cisco routers and switches, OSPF routing, VLAN segmentation and a full IP addressing plan.

CORE TECHNICAL SKILLS

Networking: TCP/IP, subnetting, VLANs, OSPF, NAT, DNS, DHCP, SNMP, Wi-Fi, WireGuard VPN, VoIP/SIP basics, QoS concepts, Cisco IOS on physical routers and switches

Systems: Windows Server 2022, Active Directory, Group Policy, PowerShell, Linux (Ubuntu, Debian), Docker, Caddy, Keycloak (OIDC/SSO), FreePBX/Asterisk

Software Development: Python (FastAPI), JavaScript (Next.js, React Native/Expo), PostgreSQL, REST APIs, Git (GitLab); Java and C++ (coursework)

IT Support: Windows 10/11 support, hardware maintenance, printers and peripherals, ticketing (Spiceworks), PDQ Deploy/Inventory, remote support tools, user training

Security & Documentation: access control, secure remote access, DNS filtering, Fail2ban; network diagrams, technical documentation, requirements gathering

EDUCATION

Bachelor of Engineering in Computer Science | DMI-St. Eugene University

2018 – 2023

CGPA 3.7. Relevant coursework: Network Design, Security and Management; Object-Oriented System Analysis and Design; Software Engineering; Computer Installation and Servicing.

CERTIFICATIONS & LICENCES

- **Licensed Practitioner**, Information and Communications Technology Association of Zambia (ICTAZ)
- **CCNA (in progress)**: completed the full CCNA curriculum and labs on physical Cisco routers and switches at the University of Zambia; preparing for the certification exam.
- **Introduction to Cybersecurity**, Cisco Networking Academy (Smart Zambia Institute)
- **Introduction to Data Science**, Cisco Networking Academy (Smart Zambia Institute)