SAMUEL MWANGI NGONJO

Tech Growth Engineer — Software & Systems

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Professional Summary

Python Web Application Developer specializing in AI-enabled backend systems and cloud-deployed web platforms. Experienced in building and scaling Django-based APIs, integrating AI services such as intelligent search, document processing, and automation, and productionizing reliable AI-driven workflows. Systems-minded engineer with a biomedical engineering background, skilled in secure backend architecture, cloud deployment, and CI/CD-ready systems, with growing specialization in AI platforms.

I've worked hands-on with life-critical medical technology and in fast-paced software environments, giving me a rare mix of engineering discipline, product thinking, and business impact.

I partner with organizations to transition from manual processes to smart, scalable, digital systems that support growth. I also empowering teams through training, mentorship, and clear technical communication.

CORE SKILLS

Backend Engineering & Integrations

- Django, Flask, FastAPI, Python, RESTful APIs, backend architecture for AI-enabled systems
- PostgreSQL, SQLite, Firebase, MySQL
- Authentication, security, data interoperability
- Cloud-based deployment & system scaling

Automation & Operational Efficiency

- Workflow automation & system optimization
- CMMS & health tech system digitization
- CI/CD practices, logging & monitoring
- API-driven process improvement

Data & Infrastructure

- Data pipelines, scripting, and reporting
- Pandas, NumPy, analytics workflows
- Device connectivity and IoT integrations
- Linux, Git, container-ready workflows

Tech Leadership & Enablement

- Technical training & team mentoring

- Communication across clinical & technical teams

- Requirements gathering & solution architecture

- Documentation, SOP development, and compliance support

AI Platforms & Cloud

- Azure App Services

- Azure AI Services (Search, Document Intelligence: integration exposure)

- Prompt-based workflows & AI orchestration

- AI-backed document processing & semantic search

- Cloud-native backend deployment & scaling

Experience

1. Backend & AI Engineer

*OnlineMedic Healthcare | **Nov 2024 – March 2025***

- Designed and deployed **Python (Django) backend services** supporting AI-enabled healthcare workflows.
- Integrated AI modules for **document understanding, data extraction,** and **automation-ready pipelines.**
- Built scalable REST APIs to support **AI-driven features** across web and mobile platforms.
- Collaborated with AI and data teams to **productionize intelligent services**, ensuring reliability and security.
- Implemented backend logic compatible with **RAG-style architectures** and prompt-driven workflows.
- Supported cloud deployment and CI/CD-ready workflows for rapid iteration and stable releases.

2. Biomedical Engineering Technologist

*Kenyatta University Teaching, Referral & Research Hospital – Level 6 | **Mar 2024 – May 2024***

- Maintained and repaired medical equipment, ensuring continuous clinical operation.
- Diagnosed and resolved breakdowns promptly to minimize downtime.
- Deployed and tested new machines, training staff for smooth adoption.
- Developed SOPs and digital tracking systems to streamline workflows and monitor devices.

3. Biomedical Engineering Technologist

*Thika Level 5 Hospital | **Nov 2023 – Jan 2024***

- Modernized utility and imaging systems to improve reliability.
- Optimized preventive maintenance, reducing downtime by 20%.
- Implemented a digital CMMS for efficient equipment tracking.
- Ensured compliance through regular inspections and documentation.

4. Senior Software Developer

*Gonep Pharmacuticals | **August 2025 – December 2025***

- Modernized utility and lab systems, improving reliability and efficiency across departments.
- Built and deployed scalable internal applications for better data handling and operational workflows.
- Migrated legacy systems to modern platforms, reducing maintenance overhead and errors.
- Automated compliance reporting and inspection processes, cutting manual effort by 60%+ while ensuring regulatory adherence.
- Partnered with cross-functional teams to optimize system performance, achieving 70%+ reduction in downtime.
- Built backend systems and internal web applications supporting **automation, data workflows, and scalable operations.**
- Deployed and maintained production systems with **cloud-ready architecture** and **CI/CD practices.**

Education

1. Diploma in Medical Engineering Technology

*Kenya Medical Training College – **2024***

Key subjects: Clinical Engineering, Health Informatics, Medical Device Design, Engineering Math, Mechanical Systems, Electronics.

2. Computer Science in Healthcare (Self- Driven Education)

Learned through various platforms and improved my skills through continuous learning and development. This accompanied by actively being involved with projects really contributed to my improved skills.

Technical Focus Areas: Python backend development, Django, Flask & FastAPI APIs, relational and NoSQL databases, AI-enabled backend systems, document processing and intelligent search workflows, retrieval-augmented generation (RAG) patterns, cloud infrastructure, CI/CD-ready deployment, cybersecurity and data privacy compliance, healthcare systems interoperability, workflow automation, and medical device interface programming.

Certifications & Training

- **Medical Device QA & Safety –** Defibrillators, NIBP, Neonatal Devices, Electrical Safety (Fluke Biomedical)

- **Advanced Imaging QA –** PET/CT & SPECT/CT (GE Healthcare)

- **Clinical Systems & Simulation –** Oxygen QA, ProSim 4 & 8 (Fluke Biomedical)

Skills

1. Technical Skills

- **Programming & Development:** Python, JavaScript, SQL, AI/ML fundamentals
- **Web & Backend:** Django, Node.js, REST APIs, React, PostgreSQL, Firebase
- **Tools & Workflow:** Git/GitHub, Postman, Airtable, Linux, CI/CD-ready environments

- **Systems & IoT Integration:** Remote diagnostics, device connectivity, embedded programming
- **Operational & Compliance Systems:** SOP development, workflow automation, regulatory support
- GitHub Actions (CI/CD pipelines)
- Docker (container-ready workflows)
- Cloud deployment (Azure-ready architecture)

2. Soft Skills

- Clear communicator across technical and non-technical teams
- Quick to learn new systems and tools
- Reliable in teams or independent roles
- Skilled at simplifying technical concepts for others
- Strong problem-solving and critical thinking
- Field-tested in hands-on operations

- Adapts fast to new technologies and workflows
- Effective collaborator
- Accurate in technical documentation and reporting
- Confident in client communication and on-site support
- Experienced in team coordination and field leadership

References
Available upon request.