

SAMMY M. KASANGO

System Software & Network Engineer

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PROFESSIONAL SUMMARY

Results-driven Software & Systems Engineer with a Bachelor's degree in Software Engineering and hands-on experience in full-stack development, API integration, database management, and backend systems. Proficient in Python, C++, C#, JavaScript, and PHP with working knowledge of Linux-based environments, Docker containerization, and RESTful API design. Demonstrated ability to design scalable, high-performance applications in Agile team environments. Seeking to leverage technical expertise in software engineering, system design, and network-oriented development to contribute to enterprise-grade solutions.

TECHNICAL SKILLS

Languages	Python, JavaScript (ES6+), PHP, C#, C++, SQL, Bash
Web & Backend	React.js, Vue.js, Node.js, Laravel, Django, Express.js, Flask, HTML5, CSS3
Databases	MySQL, PostgreSQL, MongoDB, Firebase, SQLite
Systems & DevOps	Linux (Ubuntu/Debian), Docker, Git/GitHub, Postman, REST APIs, MVC Architecture
Networking Concepts	TCP/IP, DNS, HTTP/HTTPS, API Gateway, Network Troubleshooting
Methodologies	Agile/Scrum, OOP, CI/CD Principles, TDD (Unit Testing), Software Documentation
Tools & Platforms	VS Code, Figma, Firebase, GitHub Actions, Docker Compose

PROFESSIONAL EXPERIENCE

Software Engineering Intern

Jul 2022 – Dec 2022

Tunga.io / Remote

- Designed and implemented scalable backend microservices using Django REST Framework, improving API response efficiency for client-facing applications.
- Collaborated in an Agile/Scrum team of 6 engineers, contributing to sprint planning, daily standups, and code reviews using Git and GitHub.
- Expanded unit test coverage by 30%, reducing post-deployment defect rates and improving overall software reliability.
- Documented API endpoints using Postman and Swagger, enabling faster onboarding for new team members.
- Integrated third-party APIs and debugged cross-service communication issues within a distributed system architecture.

KEY PROJECTS

AI-Powered Health Risk Predictor | Python, TensorFlow, Flask, MySQL, Docker

- Built a machine learning model to analyze patient data and flag early health risks with high predictive accuracy.
- Deployed predictive API using Flask and Docker, enabling containerized, scalable delivery in cloud-compatible environments.
- Engineered a MySQL schema optimized for medical data queries, reducing average query time by 40%.

E-Commerce Platform (Full Stack) | React.js, Node.js, MongoDB, M-Pesa API

- Architected a full-stack e-commerce solution with user authentication, shopping cart, product management, and secure checkout.
- Integrated M-Pesa Daraja API for local mobile payment processing, enabling real-time transaction verification.
- Applied RESTful API best practices across 12+ endpoints, ensuring clean, maintainable, and testable code.

Bug Detection System (OOP-Based) / C++

- Developed a static analysis tool that parses source code to detect 5 common code smells including duplicate code and long methods.
- Reduced bug-related support tickets by 25% in test environments through early defect identification.

School Management System | PHP (Laravel), MySQL

- Built a multi-module school ERP system handling student registration, fee tracking, grade reporting, and admin dashboards.
- Deployed the system to a live school environment in Nakuru County, serving 300+ active users.
- Implemented role-based access control (RBAC) ensuring data security for students, teachers, and administrators.

EDUCATION

Bachelor of Science in Software Engineering

Aug 2024 – Present

Murang'a University of Technology | Murang'a, Kenya

- Relevant Coursework: Data Structures & Algorithms, Operating Systems, Computer Networks, Database Systems, Software Architecture, Distributed Systems.

Certificate in Computer Operations & Packages

Completed

Rockers Computer College | Machakos, Kenya

Kenya Certificate of Secondary Education (KCSE)

Kyanguli Secondary School | Machakos, Kenya

LEADERSHIP & MENTORSHIP

Teaching Assistant – Advanced Software Engineering

2026 – Present

- Mentor undergraduate students in software architecture, debugging, and industry best practices.

Lead – Murang'a Tech CLUB and Murang'a Christian Union Engineer.

2025

- Organized technical workshops, hackathons, and peer coding sessions for 50+ student members.

REFERENCES

Available upon request.