

Lucy Mwaura

Software Developer

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PROFESSIONAL SUMMARY

Fast-shipping Full-Stack Engineer with 3+ years shipping production systems end-to-end. Built and deployed 4+ user-facing products handling real-world scale (100+ monthly transactions, 500+ user records, 50K+ API requests/month). Daily user of AI tools for coding, debugging, and rapid prototyping with relentless focus on ownership and shipping high-velocity, AI-native engineering solutions.

SKILLS

RESTful API Design & Integration, Python & Django, JavaScript & Modern Web Development, React Fundamentals & Frontend Basics, Next.js, TypeScript, PostgreSQL & Database Architecture, Full-Stack Feature Ownership, API Integration & Third-Party Connectors, GitHub & Git Workflows, ChatGPT, Copilot & Cursor, Claude & LLM Integration, Django REST Framework, HTMX & Interactive UIs, Tailwind CSS & Responsive Design, CircleCI & CI/CD Automation, Docker & Container Deployment, Sentry Error Tracking & Production Debugging, pytest & Test Automation, JWT Authentication & RBAC, Payment Gateway Integration, System Performance Optimization, Linux & Command Line Tools, Code Review & Collaboration, HTML5 & CSS3

WORK EXPERIENCE

Backend Engineer

Craft Silicon · Full-time - Nairobi, Kenya | Jan 2025 – Present

Fast-shipping engineer owning end-to-end features from conception through production. Use AI tools (ChatGPT, Copilot) daily to accelerate coding, debug production issues faster, and prototype solutions quickly. Architect backend systems, optimize for performance at scale, and deploy with confidence using automated testing.

- Shipped 15+ full-stack features end-to-end (database design → REST APIs → frontend integration), each deployed with 92%+ test coverage and zero critical production incidents
- Reduced time-to-ship by 40% through daily use of ChatGPT and Copilot for code generation, rapid debugging, and architectural problem-solving—shipping what would previously take 2 weeks in 3 days
- Architected high-performance PostgreSQL systems handling 10K+ concurrent users, achieving sub-200ms queries through strategic indexing, ORM optimization, and connection pooling
- Shipped 50+ RESTful API endpoints serving 50K+ monthly requests with 99.95% uptime, demonstrating full understanding of API design, authentication (JWT), rate limiting, and scalable architecture
- Automated deployment pipeline with CircleCI, cutting time-to-production from 2 hours to 15 minutes—enabling 5-10 feature releases per week without manual overhead or risk
- Built integrations connecting backend systems to third-party services, demonstrating ability to understand and consume external APIs
- Deployed comprehensive error monitoring with Sentry, reducing mean-time-to-resolution (MTTR) by 40% and catching production issues before users felt them
- Wrote and maintained automated tests using pytest with 92%+ coverage, catching regressions before production and shipping with confidence across 15+ deployments monthly
- Debugged complex production issues using stack traces, Git history, and database query analysis—often resolved critical bugs in <2 hours by leveraging AI-assisted debugging

Python Django REST APIs PostgreSQL ChatGPT & Copilot CircleCI Sentry pytest Git & GitHub Docker

Software Engineer

Jumbosoft Technologies · Full-time - Nairobi, Kenya | Jan 2023 – Apr 2024

Backend-focused engineer shipping production features fast. Owned full-stack feature lifecycle: understand requirements, design databases and APIs, build frontend integration, ship to production. Used AI tools to accelerate development.

- Shipped 8+ full-stack features independently with zero external dependencies, each deployed with 92%+ test coverage and zero critical production issues—proof of ownership and execution velocity
- Optimized 15+ slow database queries through systematic Django ORM analysis and PostgreSQL indexing, reducing latency by 35% and enabling 3x higher concurrent user load without infrastructure scaling
- Designed and documented 25+ RESTful API endpoints for internal and external consumption, demonstrating ability to build integrations that other teams (and third-party services) depend on
- Built responsive, pixel-perfect UIs with semantic HTML5 and Tailwind CSS, matching designer specifications while maintaining accessibility—proof of full-stack thinking beyond backend
- Integrated third-party payment gateways with webhook processing and idempotency tokens, demonstrating real-world experience consuming external APIs and integrating mission-critical services
- Set up automated testing pipelines on every Git commit, catching bugs before production and enabling high-velocity shipping without quality degradation
- Collaborated with cross-functional teams, translating vague product requirements into shipped features without blocking on detailed specs

Python Django REST APIs PostgreSQL ChatGPT & Copilot Tailwind CSS Sentry Git & GitHub HTML5 & CSS3

Software Developer Intern

Hemlab Consultants · Internship - Nairobi, Kenya | Jul 2022 – Dec 2022

Production backend development gaining real-world experience shipping Django features at scale. Debugged production issues, optimized databases, participated in code reviews.

- Shipped 5+ Django features across full stack (database design → API implementation → server-side rendering), learning production code quality standards on day one
- Debugged and resolved 10+ production issues using Sentry logs and Git history, developing systematic problem-solving approach applicable to any stack
- Contributed to database optimization efforts, reducing query times by 25% through indexing and ORM tuning—early lesson in understanding system performance end-to-end
- Participated in code reviews, implementing peer feedback and understanding that clean code and collaboration are non-negotiable in professional engineering

Python Django REST APIs PostgreSQL Git & GitHub Sentry

Software Developer Intern

Tri Tek · Internship - Nairobi, Kenya | Jan 2022 – Jun 2022

Early career experience shipping Django backend systems. Built APIs, designed databases, created server-side rendered templates.

- Built 8+ Django REST API endpoints with proper database migrations and model relationships, understanding how backend and frontend systems integrate
- Created responsive server-side rendered Django templates, learning that frontend-backend integration happens at the API boundary
- Learned Git fundamentals and team workflows, discovering that collaboration and version control are non-negotiable in professional engineering
- Debugged issues systematically using error logs and debugging tools, developing problem-solving approach that scales from intern projects to production systems

Python Django REST APIs PostgreSQL Git & GitHub

PROJECTS

VAT Recovery & Tax Processing System

Shipped production B2B SaaS application for European tax compliance market. Solo-engineered full stack (backend APIs, database, frontend) handling real-world compliance workflows. System processes sensitive financial data with audit trails and regulatory compliance.

Python Django Django REST Framework PostgreSQL HTMX Tailwind CSS Sentry Git

- Architected normalized PostgreSQL schema (20+ tables, 3NF) with strategic indexing, achieving <200ms query response times on complex VAT workflows and tax calculations
- Shipped 35+ RESTful API endpoints handling VAT specialist workflows, compliance tracking, and report generation—production-ready from first deployment
- Implemented HTMX-driven dynamic forms enabling real-time VAT data validation without page reloads, improving form completion rate by 45%
- Built responsive, production-grade UI with Tailwind CSS and accessibility standards (WCAG 2.1), ensuring compliance with European accessibility requirements
- Secured system with role-based access control (RBAC), fine-grained permissions, and comprehensive audit logging for regulatory compliance and user trust
- Optimized tax calculation queries through Django ORM tuning and PostgreSQL indexing, ensuring sub-second computation even for large datasets with complex multi-country rules
- Integrated Sentry for real-time error tracking, capturing issues in production and enabling rapid debugging with full stack traces and context
- Ensured compliance with European tax regulations (GDPR, financial data protection) through secure data handling, encryption, and comprehensive audit trails

Flockr: Livestock E-Commerce Platform

Shipped production e-commerce marketplace from scratch. Solo-engineered complete platform (backend APIs, database, real-time frontend, payment integration) processing 100+ monthly transactions with zero data loss. Real product serving real farmers and livestock buyers.

Python Django Django REST Framework PostgreSQL HTMX Tailwind CSS Sentry pytest Git

- Architected normalized PostgreSQL schema (20+ tables) with strategic indexing supporting complex livestock inventory, user management, and transaction workflows at scale
- Shipped 40+ RESTful API endpoints using Django REST Framework with JWT authentication and multi-role RBAC (Admin, Farmer, Buyer, Worker), handling complex marketplace logic
- Built interactive frontend with HTMX enabling real-time inventory updates, live search, and dynamic filtering—improving user engagement by 40% and reducing bounce rate
- Styled responsive, mobile-first UI with Tailwind CSS achieving pixel-perfect design with semantic HTML5 and accessibility best practices for diverse user base
- Implemented server-side rendering (SSR) Django templates with dynamic content, improving SEO for livestock listings and search engine discoverability
- Integrated payment gateway with asynchronous webhook verification, retry logic, and idempotency tokens—processed 100+ monthly transactions with zero payment data loss or failures
- Optimized complex SQL queries (JOINS across 6+ tables) to <200ms response time through Django ORM optimization, database indexing, and connection pooling for 500+ daily active users
- Implemented secure OTP-based email verification using asynchronous email processing and rate limiting for user registration and password reset
- Deployed comprehensive error tracking with Sentry, capturing production issues in real-time and reducing mean-time-to-resolution (MTTR) by 35%
- Achieved 90%+ code coverage using pytest with unit, integration, and end-to-end tests ensuring transaction and payment logic reliability before production

HRMS: Enterprise Human Resource Management System

Shipped production HR management platform as part of 5-engineer distributed team. Manages 500+ employee records across enterprise organization. Owned 6 core modules handling employee lifecycle, roles/permissions, reporting, and self-service portal.

Python Django Django REST Framework PostgreSQL HTMX Tailwind CSS Sentry pytest Git

- Collaborated with distributed 5-person team using Git feature branches and pull requests, establishing professional code review practices and merge discipline
- Owned and shipped 6 core Django modules: Employee Register, Role & Permission Management, Department Hierarchy, Dynamic Reporting, System Configuration, Self-Service Portal
- Shipped 35+ RESTful API endpoints using Django REST Framework for employee lifecycle management, attendance tracking, leave processing, and multi-tenant RBAC
- Built interactive frontend with HTMX for real-time form submissions, live data validation, and dynamic component updates improving system responsiveness
- Designed flexible permissions system supporting 6 organizational departments with configurable user limits and granular role assignments using Django permission framework
- Styled professional, responsive UI with Tailwind CSS and semantic HTML5, ensuring polished appearance and accessibility across all user roles (admins, managers, employees)
- Implemented server-side rendered (SSR) Django templates with dynamic data binding, enabling rich interactivity without JavaScript framework complexity
- Secured system with JWT token-based authentication and rate limiting protecting API endpoints from unauthorized access and abuse
- Built dynamic report generation engine exporting employee data (attendance, leave, payroll) to PDF/Excel formats, supporting 50+ monthly reports
- Deployed Sentry monitoring and error tracking, reducing issue resolution time by 25% through proactive alerts and enriched stack traces
- System successfully manages 500+ employee records and reduced HR administrative overhead by 60% through workflow automation and employee self-service capabilities
- Practiced production-grade collaboration using Git, code reviews, and iterative refinement—standard practices in professional engineering teams

EDUCATION

St. Paul's University, Limuru

Bachelor of Science in Computer Science | Sep 2021 – 2024

Specialized in software engineering and backend development with focus on system design and production-grade code quality.

LANGUAGES

English (Native) Kiswahili (Native)

INTERESTS

Full-Stack Thinking (Backend + Frontend), UX-Focused Development, Object-Oriented Design Thinking, System Architecture & Performance Optimization, Problem Solving & Debugging, Code Quality & Best Practices, Team Collaboration & Code Review, Technical Communication, Attention to Detail (Code & UI), Continuous Learning & Technology Adaptation