Ernest Kamau

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FULL-STACK WEB DEVELOPER | BACKEND DEVELOPER

I'm an early-career software developer with hands-on experience building full-stack web applications using React JS, Python (Flask and Django), PostgreSQL, and Tailwind CSS. I recently completed a Software Development Bootcamp at Moringa School, where I specialized in modern web technologies and built real-world projects that solve local problems.

I've contributed to projects such as *Shirikisha*, a chama management platform, and *Shuleni*, an online school system—focusing on role-based authentication, assessment modules, and secure user flows. I bring a strong foundation in both frontend and backend development, a commitment to continuous learning, and a passion for building solutions that are efficient, secure, and user-focused. I'm now seeking a Junior Developer role where I can make meaningful contributions and continuously grow through collaboration and problem-solving within a collaborative, forward-thinking team.

TECHNICAL PROJECTS

Shuleni Online School Management System (React + Flask) — Links: GitHub Repo, Live Demo
Shuleni is a full-stack web-based platform for managing online schools in Kenya. It supports role-based access for school owners, educators, and students, enabling classroom management, assessment-taking module, grading, attendance tracking, and digital resource sharing. I contributed to this project in the following ways;

- Developed secure, role-based registration and login endpoints using Flask and JWT, enabling School Owner, Educator, and Student roles with protected route access
- Built logic to restrict class and school access so that users only view classes they belong to — students and educators can only access their assigned schools and classrooms
- Implemented a **first-time login flow**: Educators and students are redirected to a password update page before accessing the rest of the platform
- Designed and developed the full **assignment-taking module**, allowing students to view, attempt, and submit assessments with support for multiple question types
- Built educator features for viewing student submissions and assigning grades via an intuitive grading interface

CLI-Inventory Manager (Python) - GitHub: https://github.com/ErnestKamau/CLI-inventory-manager
A Python-based Inventory Management System that allows users to manage products, track stock levels, organize categories, and record sales—all from the terminal.

- Used SQLAlchemy ORM to define database schemas as Python classes, manages schema changes with Alembic migrations, and configures relationships between entities using foreign keys and ORM relationships.
- User Input Handling - Built prompts for users' input (e.g., selecting menu options, entering data for new records) and validated this input.
- Feedback and Error Messages - provided feedback to users after actions (e.g., success messages, error notifications) to improve usability.
- Service Layer Integration - Wrote the CLI menus, calling service functions to perform business logic, keeping the CLI code focused on user interaction

Shirikisha Investment Groups management system (React + Flask) — Links: Github repo, *deployed site*
Shirikisha is a full-stack web platform that simplifies and digitizes the management of Kenyan chamas (investment groups). Members can create, join, and manage chama groups, track contributions and finances, schedule meetings, make announcements, and assign roles — all in one platform.

- Wrote a React frontend with reusable components, dynamic routing (`react-router-dom`), state management via hooks, and Axios for API calls, with Tailwind CSS for styling
- Developed a RESTful Flask backend with PostgreSQL and implemented secure user authentication using JSON Web Tokens (JWT), including login, signup, token-based route protection, and role-based access control
- Designed modular features: user dashboards, chama group detail pages, editable modals, and announcements
- Set up a deployment pipeline using Render and version control via GitHub for continuous updates

EXPERIENCE

Ministry of Energy and Petroleum –   **Nairobi, Kenya**

ICT Support (Industrial Attachment) —   *Sep 2024 – Dec 2024*

- Resolved an average of 15 support tickets per week.
- Set up and configured new workstations, printers, software, and user account administration for new employees, contributing to a streamlined onboarding process.
- Diagnosed and fixed hardware issues, reducing downtime across departments.
- Collaborated with other IT team members to roll out system upgrades and security patches.

EDUCATION

Full Stack Software Engineering Bootcamp MORINGA SCHOOL   **Feb 2025 – August 2025**

Diploma in INFORMATION TECHNOLOGY   **KCA University • Jan 2023 – Dec 2024**