

# ENOCK BETT

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## SUMMARY

Innovative Software Engineer with a passion for building scalable, user-centric web applications. Proficient in Python, Flask, REST API design, and third-party integrations (M-Pesa, SMS). Strong DevOps skills and cloud deployment, with a proven ability to deliver reliable, high-impact solutions.

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## EDUCATION

**Africode Academy**  
Software Engineering: NanoDegree

Bomet, Kenya  
May 2024 - Dec 2024

**Kenya Highlands Univesity**  
Computer Packages: Distinction

Kericho, Kenya  
Sept 2023 - March 2024

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## SKILLS SUMMARY

- **Languages:** Python, HTML5, CSS3
  - **Frameworks & Libraries:** Flask, SQLAlchemy, Flask-Security, Flask-RESTful, Flask-Mail, Flask-WTF, Flask-Migrate, Bootstrap, FastAPI
  - **Databases:** PostgreSQL, SQLite
  - **Tools & Technologies:** Docker, JWT, Flask-Login, Africa's Talking API, Swagger, CI/CD
  - **Other:** REST API Design, Database Design, Security Practices, Web Accessibility, Responsive Design, Mpesa Daraja API, Git & Github, Deployment
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## PROJECTS

### TabPay – Community Payments & Meeting Scheduler | [LINK](#)

- Architected a multi-tier data model (Umbrella → Block → Zone → Member → Committee) in SQLAlchemy, enforcing one-to-many and many-to-many relations for scalable community hierarchy.
- Extended Flask-Security with custom registration flows and auto-assigned roles (Umbrella Creator, Chairman, Secretary, Member), securing admin routes.
- Leveraged Africa's Talking SMS API to dispatch real-time notifications for meeting invites elevating user engagement.
- Integrated M-Pesa payment gateway with unique transaction IDs and webhook callbacks, automating collection of community contributions.
- Deployed the application on DigitalOcean, configuring Ubuntu servers, Docker containers, Nginx reverse proxy, and automated backups to ensure high availability.
- Modularized routes into blueprints and adhered to MVC patterns, cutting code duplication and improving maintainability.
- Designed responsive admin dashboards with WTForms and Bootstrap.

**Key Technologies:** Python, Flask, Flask-Security, SQLAlchemy, Flask-WTF, M-Pesa Daraja API, Africa's Talking API, REST, JavaScript, HTML/CSS.

## Birthday Contribution Platform | [LINK](#)

- Architected and deployed a full-stack birthday gift platform enabling 50+ users to register, send wishes, and contribute over KES 10,000 toward a shared birthday fund.
- Secured user and admin flows with Flask-Login, custom role-based access, and hashed credentials.
- Integrated a payment workflow with real-time contribution status via RESTful JSON endpoints.
- Designed dynamic, validated forms and celebratory UI using Flask-WTF, Jinja2, and JavaScript animations.
- Engineered a modular admin dashboard (CRUD, pagination, flash messaging) to manage users, messages, contributions and events.
- Structured relational database with efficient one-to-many mappings and scalable route blueprints.

**Key Technologies:** Python, Flask, SQLAlchemy, Flask-WTF, Flask-Login, Jinja2, JavaScript, HTML/CSS, REST APIs, Mpesa Daraja API.

## Weather App | [LINK](#)

- Developed a Flask-based web application to deliver real-time weather data for any city and country input, leveraging a clear GET/POST form workflow to drive user-centric interactions.
- Implemented secure API key management using dotenv to keep sensitive credentials protected.
- Parsed and transformed raw JSON into actionable metrics—temperature, humidity, wind speed, precipitation, sunrise/sunset times, and formatted dates—using Python's datetime module to normalize timestamps.
- Engineered a responsive, mobile-first UI with Jinja2 templating and Bootstrap 5, ensuring consistent rendering across devices and enhancing UX/UI appeal.

**Key Technologies:** Python, Flask, Jinja2, Bootstrap 5, OpenWeatherMap API, requests, python-dotenv, Git/GitHub, RESTful API.

## Student Management System project | [LINK](#)

- Built a Flask-based Student Management System with role-based access control (Admin/Teacher/Student), secure authentication (Flask-Security) and WTForms-powered registration and profile editing.
- Designed a normalized SQLAlchemy schema (User, Role, Course, Enrollment) and managed migrations via Flask-Migrate for seamless database evolution.
- Integrated automated email workflows (Flask-Mailman) for confirmations and notifications, loading SMTP credentials securely with python-dotenv.
- Developed RESTful CRUD endpoints for user and course management, complete with server-side validation, flash messaging, and error handling to ensure high availability and UX resilience.
- Ensured security best practices—password hashing, endpoint restrictions with @roles\_required/@login\_required, and MVC-style separation of concerns—while delivering a responsive UI via Jinja2 templates and Flask-Bootstrap.

**Key Technologies:** Python, Flask, SQLAlchemy, Flask-Security, WTForms, Flask-Mailman, Jinja2, Bootstrap, Git/GitHub.

## CERTIFICATES

### Africode Academy | [LINK](#)

- **Full-Stack Development:** Built responsive, interactive web applications using HTML, CSS, JavaScript, and Python (OOP, data structures); designed and consumed scalable RESTful APIs with Flask.
- **Data Management & Security:** Architected relational databases and performed CRUD operations with SQL/ORM; implemented role-based access control for robust authentication and authorization.
- **DevOps & Deployment:** Automated containerized workflows with Docker and CI/CD pipelines; managed server configurations (Nginx) and cloud deployments for high-availability environments.

### Kenya Highlands University | [LINK](#)

- Completed comprehensive Computer Packages coursework at Kenya Highlands University, gaining proficiency in Microsoft Office Suite (Word, Excel, PowerPoint, Access) and Google Workspace tools.

### ALX | [LINK](#)

Completed the 6-week AI Career Essentials program at ALX, mastering AI tools, prompt engineering, and AI-driven job-readiness skills to accelerate career growth.