

Collins Kiprono

Full Stack Software Engineer

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Profile

Full-stack software engineer with just under 5 years of experience building secure, scalable, and user-centric web and mobile applications. Proficient in modern JavaScript/TypeScript frameworks, backend APIs and Database Design. Strong focus on performance, security, and user experience.

Technical Skills

- **Frontend:** React, Next.js, React Native, Expo, Flutter (Dart), SCSS, Tailwind CSS, HTML, CSS, JavaScript, TypeScript
- **Backend:** Node.js, Express.js
- **Database:** PostgreSQL, Prisma
- **Authentication & Security:** Clerk, JWT, OAuth, Role-Based Access Control (RBAC)
- **Payments & API Integration:** Safaricom Daraja API (MPesa), RESTful APIs
- **DevOps & Deployment:** AWS, Vercel, PM2, Nginx, CI/CD
- **Tools & Platforms:** Git, Figma
- **IT Support:** System troubleshooting, hardware & software support, network configuration, user support, system maintenance

Work Experience

Full-Stack Developer Mobile Banking Web App and Mobile App - FlexPenge

Freelance

Technologies: Next.js, React, Tailwind CSS, TypeScript, React Native, Expo, Node.js, Express.js, PostgreSQL, Prisma, Clerk, Safaricom Daraja API, Google Maps API Led the development of **FlexPenge**, a modern mobile banking web application providing smart financial tools for users and businesses. Key contributions:

- **Deposits with Daraja API:** Integrated Safaricom Daraja API for seamless MPesa deposits with backend validation and confirmations.
- **Transaction Tracking:** Implemented real-time tracking of sales and transactions, including purchase history, refunds, and payment methods for business analytics.
- **Loyalty Programs:** Developed point-based reward systems to drive customer retention and increase engagement.

- **Customer Insights:** Built dashboards showing customer spending habits and preferences to inform targeted marketing strategies.
- **QR Code Payments:** Enabled secure, in-store QR code payments, integrated with promotional campaigns.
- **Location-Based Payments:** Integrated Google Maps API allowing users to search for a location and auto-initiate payments if the location has saved billing information.
- **Secure Authentication:** Used JWT-based authentication and role-based access control (RBAC) to manage user sessions and ensure secure access to sensitive data.

Water Management System Developer – Tegat Water Project

Freelance

Technologies: Node.js, Express.js, PostgreSQL, Prisma, React, Tailwind CSS, JWT

Designed and built a **water management system** for Tegat Water Project, streamlining the tracking of water usage, billing, and payments.

Key Contributions:

- **Water Usage Tracking:** Developed tools to record and monitor monthly water meter readings for each household.
- **Automated Billing:** Implemented a billing engine that calculates monthly charges based on usage and configurable rates (e.g., base charge + usage above threshold).
- **Invoice Generation:** Created dynamic PDF invoices generated per household each month, accessible via the admin dashboard.
- **Payment Tracking:** Integrated payment logging features to track amounts paid vs. outstanding balances.
- **Admin Dashboard:** Built a secure dashboard for admins to manage customer accounts, enter readings, view reports, and monitor balances.
- **JWT Authentication:** Secured system access using JWT tokens and role-based access controls.

Education

Diploma in Information Communication Technology

The Eldoret National Polytechnic – 2022