

Mabuchi Nyirenda

Software Developer · Mobile & Digital Health Engineer

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PROFILE

Software Developer with 3+ years of experience building mobile, web, and digital health applications. Shipped Flutter-based clinical research tooling at Emory University's AppHatchery program, contributed to FHIR-based primary health systems across sub-Saharan Africa, and owns full CI/CD pipeline design and delivery for mobile applications. Strong in mobile architecture, healthcare interoperability, and developer tooling.

EXPERIENCE

Global Health Informatics Institute · AppHatchery, Emory University *May 2025 – Present | Lilongwe, Malawi (Remote)*

Junior Applications Developer *Nov 2025 – Present*

- Own and maintain the full CI/CD pipeline for Fabla using GitHub Actions, Fastlane, and Firebase App Distribution — including coverage-gated test workflows with automated PR commenting on results.
- Implement end-to-end features on Fabla, a Flutter/Dart mobile platform used by researchers to collect audio diary recordings and EMA data across active clinical and behavioural health studies.
- Mentor and review work of an intern developer; responsible for code quality, architecture decisions, and release readiness of output.
- Enforced test coverage thresholds across unit and widget test suites, improving suite reliability and defect detection before production deploys.
- Collaborate across distributed teams of engineers, researchers, designers, and institutional stakeholders at multiple universities.

Technologies: *Flutter, Dart, Firebase, GitHub Actions, Fastlane, Firebase App Distribution, Docker, REST APIs*

Applications Developer Intern *May 2025 – Oct 2025*

- Onboarded to the Fabla codebase, delivered initial feature contributions, and progressed to a full role within 6 months.

Technologies: *Flutter, Dart, Firebase, GitHub Actions*

Software Developer Intern · Werkix *Nov 2024 – Apr 2025 | Remote*

- Resolved UI regressions on a web extension and standalone chat bubble for an AI chat product serving a US-based client, eliminating a class of styling defects across both surfaces.
- Refactored shared libraries and data hooks within an NX Monorepo to reduce duplication and improve long-term maintainability.

- Managed development tasks end-to-end through Jira, from implementation to code review to release.

Technologies: *Next.js, TypeScript, NX Monorepo, Prisma ORM, Jira*

Software Engineer Intern · D-Tree International*Nov 2023 – Sep 2024 | Lilongwe, Malawi*

- Diagnosed and resolved defects in FHIR-based mobile health systems used by community health workers across sub-Saharan Africa, tracing issues from the field through the system codebase to production.
- Implemented new clinical features using Kotlin and FHIR Mapping Language, converting patient-provided data into FHIR-compliant resources for storage and interoperability.
- Tested new features on development devices against a staging server, simulating real-world clinical workflows before release.
- Authored end-user and developer documentation for project tooling and system features.

Technologies: *Kotlin, FHIR, FHIR Mapping Language, Android*

Software Developer Intern · Infinite Solutions*Sep 2022 – Dec 2022 | Blantyre, Malawi*

- Contributed to design and development of a personnel and prisoner management system for Malawi Prison Services.
- Built a corporate website for a client using WordPress and Angular.js.

Technologies: *Vue.js, Laravel, WordPress, Angular.js*

EDUCATION

BSc Computer Science · DMI St. John the Baptist University*2022 | Lilongwe, Malawi*

GPA: 4.0 / 5.0 · Relevant coursework: *Software Engineering, Computer Networks, Operating Systems, Internet Programming, Project Management*

SELECTED PROJECTS

Fabla – Front-End Contributor*2025 – Present*

Flutter mobile research platform developed through AppHatchery at Emory University. Enables secure audio diary and EMA data collection from study participants. Responsibilities span feature delivery, bug triage, code reviews, CI/CD pipeline ownership, and production release management.

FHIR Server (Personal Project)*2024*

Containerized FHIR server built with Spring Boot, Docker, and PostgreSQL. Implemented RESTful APIs for FHIR resources (Organization, Location, Observation) following FHIR resource modelling and healthcare data exchange standards.

SKILLS & TECHNOLOGIES

Mobile	Flutter, Dart, Kotlin, Android Development
Frontend	Next.js, TypeScript, JavaScript, HTML/CSS, Angular.js, Vue.js
Backend	Spring Boot, Ruby on Rails, Laravel, Prisma ORM, REST APIs

Health Tech	FHIR, FHIR Mapping Language, Healthcare Interoperability, Digital Health Systems
Databases	Firebase, PostgreSQL, SQLite
DevOps / CI	GitHub Actions, Docker, Fastlane, Firebase App Distribution, Git
Practices	TDD, Code Review, Agile, Technical Documentation, Software Architecture

References are available on request.