STUDENT DEVELOPER · KENYA

Geofrey

Computer Science Student | Aspiring Software Developer

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Availability: open to opportunities during semester breaks

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PROFILE

Computer Science student at Egerton University building practical programming experience through personal software projects and structured study. Interested in Python, software engineering, and understanding the principles behind reliable, maintainable software. Values learning concepts deeply, solving problems methodically, and documenting progress honestly.

EDUCATION

Egerton University

2026 - Present

Bachelor of Science in Computer Science

Current focus includes programming, computer systems, and foundational Computer Science subjects.

Homa Bay National School

Completed 2025

Kenya Certificate of Secondary Education (KCSE)

Completed secondary education in 2025, attaining a mean grade of B+ in the KCSE.

Adek Primary School

Completed 2021

Kenya Certificate of Primary Education (KCPE)

Completed primary education in 2021, attaining 377 marks in the KCPE.

SELECTED PROJECTS

Calculator App

In progress

Python · Kivy · KivyMD · Showcase: calculator-app-showcase (GitHub)

- Built a calculator for desktop and Android with Standard and Scientific modes, a history of the last 100 calculations, and a unit converter (length, area, temperature, volume) in one application.
- Wrote an expression parser with exact decimal arithmetic instead of using eval, and kept the calculation logic separate from the Kivy interface so the engine can be tested without the GUI.
- Audited and rebuilt the original single-file app, fixing logic, security and structure problems; the engine has 65 unit tests, and the finished app has been installed and run successfully.

Personal portfolio website

Completed

HTML · CSS · JavaScript · Showcase: portfolio-website-showcase (GitHub)

- Building a responsive website to present projects, learning notes, and a student developer profile.
- Practising semantic page structure, responsive styling, accessibility, and browser interactions.

Enterprise Library Terminal

In progress

Python · JSON · OOP · Showcase: library-terminal-showcase (GitHub)

- Built a command-line library management system that tracks inventory, handles book checkouts and returns, and saves its data to JSON files.
- Practising object-oriented programming, data sanitization, robust exception handling, and JSON data serialization.

GPA Tracker

In progress

Python · KivyMD · SQLite3 · Showcase: gpa-tracker-showcase (GitHub)

- Built a personal desktop app that records courses by semester and reports final marks, grades, GPA and degree class using Egerton University's 2020 grading regulations; not an official university tool.
- Used exact decimal arithmetic with half-up rounding, keeping grading logic separate from the GUI across 21 modules and SQLite storage.
- Checked with 564 automated checks and mutation testing (89 planted bugs, all caught); no real-device testing yet.

Learning Lab

In progress

Python · small scripts and study experiments

A growing collection of small Python scripts, grouped by kind and published on the portfolio with short excerpts and notes on what each one practised and where it falls short.

EduMind AI

Planned

Python · scikit-learn · Django (planned stack)

- Planned AI and machine-learning project that analyses academic results, predicts marks and recommends what a student should revise next.
- Roadmap covers data processing, analysis, a first prediction model, a recommendation engine, a Django web application, testing and deployment, and evaluation with real users.

TECHNICAL LEARNING

Python | Object-oriented programming | HTML | CSS | JavaScript fundamentals | Kivy / KivyMD | SQLite | Automated testing (unittest)

These describe current learning and project exposure, not a claim of professional-level proficiency.

ADDITIONAL DETAILS

References: available on request.