TOLBERT OKOTH ASUMBA Full Stack Developer | Software Engineer Email: osumba30@gmail.com | LinkedIn: linkedin.com/in/tolbert-asumba-542b3b344 | GitHub: github.com/Tolbert-Okoth

PROFESSIONAL SUMMARY Innovative Full Stack Developer and BSc Mathematics & Computer Science student with a strong foundation in algorithmic logic and system architecture. Proven track record of building complex, scalable web applications that integrate AI, Fintech APIs, and real-time data processing. Passionate about solving local problems through technology, from healthcare triage systems to agricultural marketplaces.

TECHNICAL SKILLS

- **Languages:** JavaScript (ES6+), Python, SQL, HTML5, CSS3.
- **Frontend:** React.js, Redux, Bootstrap 5, Tailwind CSS, Recharts.
- **Backend:** Node.js, Express, Python (Flask), Socket.io.
- **Database & Cloud:** PostgreSQL, MongoDB, Firebase, Cloudinary, Render, Vercel.
- **Tools & APIs:** Git, M-Pesa API (Daraja), Groq AI (Llama-3), Alpaca Finance API.

FEATURED PROJECTS

Afya-Pulse | AI-Driven Healthcare Triage System *Full Stack Developer*

- Architected a medical surveillance platform designed for the Kenyan context to streamline patient intake.
- Developed a microservices architecture connecting a React frontend with a Python-based AI Engine.
- Integrated Groq Llama-3 to analyze symptoms (supporting Sheng & Swahili) and categorize medical urgency.
- Implemented secure Service-to-Service authentication and Token Refreshing using Firebase to ensure data security.

Ghoul System | Autonomous Market Surveillance Tool *Lead Developer*

- Built a "Cyberpunk" tactical dashboard for real-time financial market analysis.
- Engineered a dual-service backend (Manager + Brain) to process live financial news and technical indicators.
- Utilized WebSockets (Socket.io) to feed data into an LLM for generating autonomous trading signals.
- Integrated Alpaca and Yahoo Finance APIs for robust data fetching and visualization.

FarmConnect | Multi-Vendor Agricultural Marketplace *Full Stack Developer*

- Developed a comprehensive e-commerce platform connecting small-scale farmers directly to buyers.

- Successfully integrated the M-Pesa API (STK Push & B2C) to facilitate secure mobile payments and wallet withdrawals.
- Created a multi-vendor admin dashboard for inventory management and refund processing.
- Implemented secure JWT authentication and optimized image storage using Cloudinary.

EDUCATION & CERTIFICATIONS

BSc Mathematics & Computer Science *Current Student* Focus: Applied Mathematics, Algorithms, Data Structures, and Software Engineering.

freeCodeCamp Certifications

- **Scientific Computing with Python** (Oct 2025)
- **Quality Assurance (Node.js)** (Aug 2025)
- **Relational Database (PostgreSQL)** (Jul 2025)
- **Back End Development and APIs** (Jul 2025)
- **Data Visualization** (Jun 2025)
- **Front End Development Libraries** (Jun 2025)
- **JavaScript Algorithms and Data Structures (Beta)** (Jun 2025)
- **Responsive Web Design** (Jun 2025)