

MUHINDO MUBARAKA

Full-Stack Developer & Software Engineer
Livestock Traceability Systems & Digital Agriculture Expert

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🌐 www.learnitwithmuhindo.com | 📺 23,000+ Subscribers

Professional Summary

Highly accomplished Full-Stack Developer and Software Engineer with **over 9 years of comprehensive experience** in designing, developing, and deploying enterprise-level web and mobile applications. Specialized expertise in **livestock identification and traceability systems**, with proven track record as the lead developer of Uganda's national livestock platform (**ULITS**). Demonstrated excellence in building scalable solutions for government ministries, NGOs, and private organizations across East Africa.

Currently pursuing a Master of Science in Computer Science at Makerere University, researching blockchain-secured federated learning for disease prediction in resource-limited environments. Passionate educator with 23,000+ YouTube subscribers, teaching programming for free. Expert in developing systems optimized for low-connectivity environments, with strong technical leadership, stakeholder engagement, and user training capabilities.

Core Competencies: System Architecture | RESTful API Development | Mobile & Web Applications | Livestock Traceability Systems | Offline Data Synchronization | GIS/GPS Integration | USSD/SMS Platforms | Team Leadership | User Training & Capacity Building

Education

Master of Science in Computer Science 2024 – Present (In Progress)
Makerere University, Kampala, Uganda *Research Focus:* Blockchain-Based Federated Learning for Livestock Disease Early Warning Systems
Investigating privacy-preserving machine learning approaches with blockchain verification for distributed agricultural data systems. Research addresses challenges of disease prediction in resource-limited, low-connectivity environments.

Bachelor of Science in Computer Science and Engineering 2019 – 2020
Islamic University of Technology (IUT), Dhaka, Bangladesh Second Class
Upper Division Specialization in Software Engineering and Technical Education. Comprehensive coursework in algorithms, data structures, software design patterns, and system development.

Higher Diploma in Computer Science and Engineering 2016 – 2018
Islamic University of Technology (IUT), Dhaka, Bangladesh Second Class
Upper Division Specialization in Web Technologies and Systems Development. Focus on full-stack development, database design, and enterprise application architecture.

Uganda Advanced Certificate of Education (UACE) 2014 – 2015
Rwenzori Saad Islamic Institute, Kasese, Uganda 9 Points
Subjects: Physics, Mathematics, Computer Studies, Entrepreneurship.

Professional Experience

Eight Tech Consults Ltd, Kampala, Uganda
Full-Stack Developer & Application Engineer January 2021 – Present

Lead technical architect and senior developer responsible for designing, developing, and deploying complex enterprise systems for government agencies, NGOs, and private sector clients. Direct all phases of software development lifecycle including requirements analysis, system design, implementation, testing, deployment, and ongoing maintenance.

Key Projects & Deliverables:

Uganda Livestock Information Tracking System (ULITS)

Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)

Lead Developer | 2021 – Present

u-lits.com

National livestock traceability platform serving as Uganda's flagship system for livestock identification, registration, movement tracking, and disease surveillance. **Direct analogue to FAO LITS requirements for South Sudan.**

- Architected comprehensive system for **unique animal identification** with EID tagging, livestock holding registration with GPS coordinates, and complete owner/stakeholder profiling
- Developed cross-platform mobile applications (Android & iOS) with **offline data capture and automatic synchronization** capabilities for field agents operating in areas with limited or no connectivity
- Designed and implemented **robust RESTful APIs** enabling seamless integration with national veterinary databases, farmer registries, and third-party systems
- Built complete modules for vaccination record management, animal movement tracking, sanitary event logging, disease surveillance, and outbreak monitoring
- Created advanced **GIS dashboards** for real-time visualization of livestock populations, movement patterns, disease spread, and herd demographics
- Implemented **multi-stakeholder portal system** serving farmers, veterinary officers, extension workers, ministry officials, and system administrators
- Conducted extensive **user training sessions** and capacity building workshops for ministry staff, district veterinary officers, and community animal health workers across Uganda
- Integrated **SMS and USSD platforms** for farmer notifications, vaccination reminders, and data collection from feature phone users
- *Technologies: Laravel, Flutter/Dart, MySQL, RESTful APIs, Firebase, GPS/GIS integration, SMS/USSD gateways*

Wildlife Offenders Database System

Uganda Wildlife Authority (UWA)

Lead Developer | 2022 – Present

Comprehensive wildlife crime management system tracking offenders, cases, court proceedings, and enforcement activities nationwide.

- Developed integrated web dashboard and mobile application for real-time wildlife crime data capture and case management
- Built biometric integration module for offender identification and recidivist tracking
- Created detailed reporting and analytics dashboards for management decision-making and policy formulation
- Implemented secure access control with role-based permissions for rangers, investigators, prosecutors, and administrators
- *Technologies: Laravel, Flutter, PostgreSQL, RESTful APIs, Biometric SDKs*

National Seed Tracking and Tracing System

Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)

Lead Developer | 2022 – Present

Digital platform for monitoring seed distribution, ensuring quality control, combating counterfeit seeds, and managing agricultural input supply chains.

- Developed mobile application with **barcode/QR code scanning** for field verification of seed authenticity and origin tracking
- Built voucher management system for subsidized seed distribution programs
- Implemented **interoperable data exchange** protocols with multiple government and partner platforms
- Created farmer, agro-dealer, inspector, and ministry administrator portals with distinct workflows
- *Technologies: Laravel, Flutter, MySQL, Barcode/QR integration, API development*

School Dynamics – Complete School Management System

SaaS Platform

Lead Developer | 2021 – Present

schooldynamics.ug

Comprehensive SaaS school management platform serving primary and secondary schools across Uganda with 2,000+ active users.

- Architected multi-tenant SaaS platform with modules for student management, staff management, fee collection, examinations, timetabling, library, transport, and hostel management
- Developed separate portals for parents, teachers, administrators, and super administrators with role-based access control
- Integrated SMS, email, and mobile push notifications for parent-teacher communication
- Implemented online payment gateways (Mobile Money, Visa, Mastercard) for school fee collection
- Built mobile applications for Android and iOS with real-time updates and offline capabilities
- *Technologies: Laravel, React.js, Flutter, MySQL, Payment Gateway APIs, SMS APIs*

Hospital Management System

Global Health Rescue

Lead Developer / 2021 – Present

globalhealthrescue.com

End-to-end healthcare platform for patient records, clinical management, pharmacy, laboratory, and billing.

- Developed comprehensive modules for patient registration, appointment scheduling, electronic health records (EHR), diagnostics, pharmacy inventory, billing, and insurance claims
- Created doctor, nurse, pharmacist, lab technician, receptionist, and administrator portals
- Implemented HIPAA-compliant data security and patient privacy measures
- Built reporting dashboards for hospital administration and financial management
- *Technologies: Laravel, Vue.js, MySQL, PDF generation, Data encryption*

E-Commerce Platform

AfriInventions

Lead Developer / 2021 – Present

afriinventions.com

Scalable e-commerce solution with inventory management, order processing, and payment integration.

- Built product catalog management, shopping cart, checkout, and payment processing systems
- Integrated multiple payment gateways and shipping providers
- Developed customer, vendor, and administrator portals
- Implemented inventory tracking, order fulfillment, and automated email notifications
- Created mobile applications for Android and iOS with push notifications
- *Technologies: Laravel, React.js, Flutter, MySQL, Payment APIs, Shipping APIs*

ICT4Farmers Platform

Eight Tech Consults Ltd

Lead Developer / 2022 – Present

[Demo Site](#)

Agricultural management platform enabling farmers to digitize farm operations and access agricultural information.

- Developed farm record management system for crop production, livestock, inputs, sales, and expenses
- Built weather information integration using external weather APIs
- Created marketplace functionality for agricultural produce and inputs
- Implemented extension service delivery module for agronomic advice
- *Technologies: Laravel, Flutter, MySQL, Weather APIs, Location Services*

Human Rights Abuse Reporting System

Center for Health, Human Rights and Development (CEHURD)

Lead Developer / 2022 – 2023

cehurd.8technologies.cloud

Mobile and web platform for documenting and managing human rights abuse cases across Uganda.

- Developed secure case documentation system with photo, video, and audio evidence capture

- Built case tracking and management workflow with status updates and notifications
- Created reporting dashboards for human rights trends analysis and advocacy
- Implemented secure data encryption and access control for sensitive information
- *Technologies: Laravel, Flutter, PostgreSQL, File encryption, RESTful APIs*

ICT for Persons with Disabilities Observatory

Lead Developer | 2022 – 2023

Uganda Communications Commission (UCC) & NUDIPU

Nationwide system serving as centralized database and resource platform for persons with disabilities.

- Developed national registry for persons with disabilities with comprehensive profiling
- Built resource directory for disability-related services, organizations, and information
- Created data analytics dashboards for disability inclusion policy formulation
- Developed mobile application and web platform for accessibility
- *Technologies: Laravel, Flutter, MySQL, Accessibility features*

Real Estate Management Platform

Lead Developer | 2021 – 2022

Eight Tech Consults Ltd

Comprehensive property listing and management system with agent portals and CRM.

- Developed property listing management with photo galleries, virtual tours, and location mapping
- Built tenant and landlord portals for rent collection, maintenance requests, and lease management
- Created agent commission tracking and performance analytics
- Implemented SMS and email notifications for property inquiries and rent reminders
- *Technologies: Laravel, Vue.js, MySQL, Google Maps API, Payment integration*

Uganda TVET Jobs and Skills Gateway Mobile Application

Lead Developer | 2022

Eight Tech Consults Ltd

Mobile application connecting technical and vocational education graduates with employment opportunities.

- Developed job listing and application management system
- Built graduate profiling with skills assessment and certification verification
- Created employer portal for job posting and candidate screening
- Implemented SMS notifications for job alerts and application status updates
- *Technologies: Flutter, Laravel API, MySQL, SMS integration*

Makerere University Seed Production Protocol App

Lead Developer | 2023

Makerere University

Research application for tracking seed plantation production protocols and experimental data collection.

- Developed field data collection mobile application for agricultural research
- Built offline data capture with automatic synchronization when connectivity available
- Created data export functionality for statistical analysis software integration
- *Technologies: Flutter, SQLite (local), Laravel API, GPS integration*

M-Omulimisa Uganda Limited

Lead Developer – Agrihub Mobile Application

2023 – 2024

Spearheaded development of comprehensive agricultural mobile application integrating weather information, marketplace functionality, and mobile payment systems to support smallholder farmers.

- Led development team in creating intuitive farmer-focused mobile application
- Integrated real-time weather APIs providing localized forecasts and agricultural advisories
- Built marketplace module connecting farmers with buyers and input suppliers
- Implemented mobile payment integration (Mobile Money, bank transfers) for secure transactions
- Optimized application for low-bandwidth environments and feature phone accessibility
- Conducted user acceptance testing and farmer training in multiple districts
- *Technologies: Flutter, Laravel API, Weather APIs, Payment Gateway integration*

Gonevas.com, Kampala, Uganda

Full-Stack Developer

2019 – 2021

Built and maintained e-commerce platform including web application and Android mobile app.

- Developed complete e-commerce website with product catalog, shopping cart, and checkout
- Created Android mobile application for enhanced customer shopping experience
- Managed website content, product listings, and customer orders
- Implemented payment gateway integration and order fulfillment workflows
- *Technologies: PHP, Laravel, Android (Java), MySQL*

Freelance Web Development

Full-Stack Developer

2018 – 2021

Various Clients

Developed websites and management systems for diverse organizations:

- **Islamic University in Uganda Alumni Association:** Website and membership management system
- **Double Tree Tours and Travel:** Corporate website with booking functionality
- **Lukman Primary School, Entebbe:** School website and content management
- **UgNews24:** News portal website and Android application
- *Technologies: WordPress, PHP, Laravel, Android development*

Learn It With Muhindo – YouTube Channel

Programming Instructor & Content Creator

2018 – 2022

23,000+ [Subscribers](#)

Created educational programming content teaching web development, mobile app development, and software engineering concepts. Published 200+ tutorial videos covering PHP, Laravel, Flutter, Android, JavaScript, and database design. Mentored thousands of aspiring developers across East Africa through free online education.

Technical Skills & Expertise

Programming Languages:	Python, PHP, JavaScript, Dart, Java, Kotlin, C#, SQL
Backend Development:	Laravel (Expert), Django, CodeIgniter, ASP.NET, RESTful API Design & Development, Microservices Architecture, API Integration
Frontend Development:	React.js, Vue.js, HTML5, CSS3, Bootstrap, Tailwind CSS, jQuery, JavaScript ES6+, Responsive Web Design
Mobile Development:	Flutter/Dart (Expert), Android Native (Java/Kotlin), iOS Development, Cross-platform Development, Offline-first Architecture, Firebase
Database Systems:	MySQL, PostgreSQL, MongoDB, Firebase Realtime Database, SQLite, Database Design & Optimization
Cloud & DevOps:	Google Firebase, Amazon Web Services (AWS), Git, GitHub, CI/CD Pipelines, Docker, Linux Server Administration
Specialized Technologies:	USSD/SMS Platform Integration, GIS/GPS Mapping, Barcode/QR Code Integration, Payment Gateway Integration (Mobile Money, Visa, Mastercard), Biometric Systems, Low-Connectivity Solutions
CMS & Tools:	WordPress (Theme & Plugin Development), Adobe Illustrator, Adobe Photoshop, Figma, Postman API Testing
Software Engineering:	System Architecture Design, Software Design Patterns, Agile/Scrum Methodologies, Test-Driven Development, Code Review, Technical Documentation
Research & Emerging Tech:	Machine Learning, Federated Learning, Blockchain Technology, IoT Systems, Data Analytics
Soft Skills:	Technical Leadership, Team Management, Stakeholder Engagement, User Training & Capacity Building, Project Management, Client Communication, Problem Solving

Languages

English: C1 Proficient **Luganda:** C1 Proficient **Swahili:** C1 Proficient **Lukonzo:** C1 Proficient

Ref: Common European Framework of Reference for Languages (CEFR)

Professional Development

- Advanced Laravel Development – Self-directed continuous learning through official documentation and community courses
- Flutter Development Certification – Completed comprehensive Flutter course covering state management, API integration, and deployment
- RESTful API Design Best Practices – Practical experience designing and implementing APIs for multiple enterprise systems
- Agile Software Development – Applied Scrum methodologies in team-based project delivery
- Technical Leadership & Team Management – Led development teams on multiple large-scale government and NGO projects

Professional References

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Certification

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any misrepresentation described herein may lead to my disqualification or dismissal, and I am available to undertake assignments as required.

Name: Muhindo Mubaraka

Date: 25 January 2025

Signature: _____