

# RICKCHARLES MUCHIRA

**Phone:** +254 745752274, +254 789103744

**Email:** rickcharlesm@gmail.com

**Address:** Nairobi, Kenya

 [GitHub: RickMuchira](#) | 30+ Projects

## PROFESSIONAL SUMMARY

**Full-Stack Developer** with 2+ years of hands-on experience building scalable web applications, AI-powered chatbots, and payment integration solutions. Proven track record delivering production systems serving 100+ university staff daily. Expertise in Python, JavaScript, React, and Laravel with strong focus on user-centered design, system optimization, and cross-functional collaboration. Distinction graduate eager to drive innovation in dynamic software development teams.

## CORE TECHNICAL SKILLS

**Programming Languages:** Python, JavaScript (ES6+), PHP

**Frontend Technologies:** React.js, Next.js, HTML5, CSS3, GSAP Animation

**Backend Frameworks:** Laravel, Node.js, Express.js, Flask

**Databases & Storage:** MySQL, SQLite, Vector Databases

**API Integration:** M-Pesa Daraja API, Twilio, WhatsApp Business API, Google Sheets API

**AI/ML Technologies:** Retrieval-Augmented Generation (RAG), LangChain, Groq AI, Prompt Engineering

**Development Tools:** Visual Studio Code, Git/GitHub, Agile (Scrum/Kanban)

**Cloud & Deployment:** Production deployment, Real-time systems, Payment gateways

## PROFESSIONAL EXPERIENCE

### STRATHMORE UNIVERSITY - ICT DEPARTMENT

**SOFTWARE DEVELOPER INTERN | February 2025 - April 2025**

- Developed a comprehensive Security Management System using Laravel (backend) and React (frontend), **now actively serving 200+ university staff and security personnel daily**
- **Reduced security incident response time** through streamlined reporting and tracking features
- Led end-to-end testing and troubleshooting, achieving **95% user satisfaction rate** during rollout

## STRATHMORE UNIVERSITY - ICT DEPARTMENT

### SOFTWARE DEVELOPER INTERN | May 2024 - July 2024

- Independently designed and deployed a WhatsApp-based chatbot for the People and Culture department
- Integrated Groq AI for natural language understanding and built a document retrieval system for accurate HR policy responses.
- Utilized Twilio API for seamless WhatsApp integration, improving information access and response times.

## PROJECTS


### Madwanzi Cybersecurity Blog Platform | 2025

**Tech Stack:** Laravel, React, MySQL, Rich Text Editor, JWT Authentication

- Building Medium-style content management platform optimized for cybersecurity professionals
- Implementing advanced rich text editor with syntax highlighting for code snippets and technical documentation
- Designed responsive interface optimized for cybersecurity documentation and code snippets
- **GitHub:** [RickMuchira/madwanzi\\_blog\\_site](https://github.com/RickMuchira/madwanzi_blog_site)

### Voting Management System (2025)

**Tech Stack:** Full-stack web application with secure authentication

- Designed and built complete voting solution in partnership with KCA University as a 2-person development team
- Implemented **256-bit encryption** for vote security and multi-factor authentication for administrators
- Created intuitive dashboards supporting **real-time vote tracking** and automated result compilation
-  [GitHub Repository](https://github.com/RickMuchira/VotingSystem.git): <https://github.com/RickMuchira/VotingSystem.git>

## Policy WHATSAPP Chatbot – Policy & Culture Department, Strathmore University (2025)

- Developed an AI-powered WhatsApp chatbot to assist university staff in accessing answers to HR-related policy questions.
- Integrated with the university's policy documents using Retrieval-Augmented Generation (RAG) for accurate, context-aware responses.
- Built with Flask, LangChain, Twilio, and vector databases to ensure fast and reliable information retrieval.
- Streamlined internal communication and reduced the workload of HR personnel by automating frequently asked questions.
- **Impact:** Reduced HR team workload, improved staff satisfaction with instant policy access

## RAG Applications Development (2024)

- Developed retrieval-augmented generation (RAG) applications using Python and Next.js, enabling semantic search over academic materials.
- Implemented vector databases with optimized indexing, enabling sub-second search across 10,000+ documents
- Created context-aware chatbots with 90%+ accuracy for academic query resolution

## M-Pesa Integration Ticketing System (2024)

**Tech Stack:** Node.js, M-Pesa Daraja API, Google Sheets API, Real-time Processing

- Built event ticketing system with automated payment verification and **real-time sales monitoring**
- Automated real-time sales monitoring and reporting via the Google Sheets API reducing manual work.
- Integrated M-Pesa payment gateway processing **transactions** with 99.8% success rate

## Mobile Money TransferSystem (2023)

- Led a team to deliver a payment solution with a responsive frontend (HTML, CSS, JavaScript) and a secure PHP/MySQL backend.
- Focused on reliable, secure money transfers and user-friendly design.: Laravel, React, MySQL, Rich Text Editor

# EDUCATION

## STRATHMORE UNIVERSITY

## Diploma in Business Information Technology | 2022-2024

- Graduated with Distinction

## MANG'U HIGH SCHOOL

Kenya Certificate of Secondary Education (KCSE) | 2018-2022

## KAHAWA BAPTIST ACADEMY

Kenya Certificate of Primary Education (KCPE) | 2007-2017

## CORE COMPETENCIES

- **Technical Leadership:** Cross-functional team collaboration, project management, system architecture design
- **Problem Solving:** Advanced analytical thinking, debugging complex systems, innovative solution development
- **Communication:** Technical documentation, client requirements gathering, presentation to stakeholders
- **Project Management:** Agile methodologies, timeline management, quality assurance, stakeholder communication
- **Adaptability:** Rapid technology adoption, continuous learning, performance optimization

## LANGUAGES

- English (Fluent)
- Kiswahili (Fluent)

## REFERENCES

Mr. Dennis Njuguna  
Regional Finance Manager, Frigoglass E.A. LTD  
☎ 0724 174879 | ✉ ngashd@gmail.com

Evans Chemekeki  
PNC Data Analyst, Strathmore University  
☎ 0720 423745 | ✉ echemekeki@gmail.com

Mrs. Anna Makomu  
Executive Director, People & Culture, Strathmore University  
☎ 0740 044241 | ✉ anna.makomu@strathmore.edu

