

SAMUEL KIPKEMBOI NDIEMA

Software Developer

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PROFILE

Versatile developer with a focus on AI-powered automation and full-stack web applications. I build scalable solutions using React, Next.js, Django, and cloud services. I also design automation workflows using AI tools and low-code platforms. Recent projects include an AI-enhanced academic assistance platform with real-time task tracking and automation. Currently building custom solutions for business automations as a freelancer.

EDUCATION

❖ **University of Kabianga**Aug 2018 – Nov 2022

BSc. Computer Science

Kericho

Graduated with Second Class Upper division.

❖ **Immaculate Conception Mukuyu Secondary School**Jan 2009 – Nov 2013

Kenya Certificate of Secondary Education (K.C.S.E)

Kitale

PROFESSIONAL EXPERIENCE

❖ **AI Automation Developer**..... Jan 2025 – Present.

Self-Employed/Freelancer

Nairobi

Designing and building AI-powered workflow solutions, full-stack web systems, and automation tools for businesses.

- Developed an AI-enhanced academic assistance platform with real-time task tracking, automated deadline management, and internal document quality checks.
- Built a voice assistant using RetellAI and Make.com to handle bookings and follow-ups via phone calls.

- Created an AI-driven content workflow using Airtable and integrated LLMs to auto-generate content, perform SEO quality checks, manage approval pipelines, and publish directly to platforms like YouTube and LinkedIn via APIs.
- Developed a domain-specific chatbot powered by Retrieval-Augmented Generation (RAG) to answer complex questions from Belle II physics publications.

❖ **Presidential Digital Talent Program Intern** Dec 2023 – Dec 2024.

ICT Authority Kenya

Malaba (KRA OSBP)

- Maintained IT equipment and ensured consistent uptime for internet and network devices.
- Delivered software support including updates, patches, and VPN configurations, ensuring strict adherence to security and compliance protocols.
- Managed IT asset inventory across 4 locations (Malaba OSBP, Lwakhakha OSBP, Bungoma DTB, and Webuye Station), maintaining accurate records in KRA ICTAM and coordinating device assignments.
- Used STA Ticket System to efficiently handle and close numerous support tickets each month, consistently meeting SLA requirements.
- Delivered remote troubleshooting support to satellite offices using Citrix Director, resolving software and connectivity issues to support seamless operations.

❖ **Software Developer** May 2023 – Nov 2023.

Research Solutions Network (Contractual)

Nairobi

- Debugged and customized a hospital management system for deployment at Sisto Mazzoldi Level 4 Hospital, addressing PHP dependency and XAMPP compatibility issues while rewriting legacy code to align with modern standards.
- Collaborated closely with hospital departments to gather requirements and customize system modules to align with their workflows, improving operational efficiency.
- Delivered remote technical support and user training using AnyDesk, guiding staff on navigating system features and troubleshooting issues.

- Successfully deployed a school management system at Marengoni Technical College, customizing features to meet academic and administrative needs while ensuring seamless functionality.

❖ **Frontend Engineer Intern**Dec 2022 – Feb 2023.

Cytonn Investments

Nairobi

- Completed a three-month rigorous internship focused on modern web development and deployment practices (Cytonn Young Leaders Program).
- Configured and administered servers using Nginx and Apache; deployed Laravel applications on DigitalOcean.
- Developed web applications using Vue.js, React, and Node.js. Gained proficiency in web development, version control systems, and database administration using MySQL and ORM tools such as Eloquent and Prisma.
- Improved company website functionality and user experience by proposing and implementing interface enhancements.

PROJECTS

1. AI & Automation Projects

i. Voice Assistant for Booking Automation

Designed an AI voice assistant using RetellAI and Make.com for service-based businesses.

- Handled appointment booking, follow-ups, and phone call scheduling, reducing missed appointments.
- Integrated with Google Calendar to ensure real-time slot availability and automatic scheduling, and connected to Go High Level CRM to trigger reminders, follow-ups, and lead management automations.

ii. AI Content Workflow Pipeline

Developed an automated content generation and publishing system for internal and client use.

- Used Airtable, Make.com and different LLMs to automate content creation, SEO validation, and approvals.
- Enabled cross-platform publishing to YouTube, LinkedIn, and blogs.

iii. Belle II Scientific Research Chatbot (RAG-powered)

Developed a domain-specific chatbot powered by Retrieval-Augmented Generation (RAG) to answer complex questions from Belle II physics publications. The system processes academic PDFs to generate Q&A pairs, stores them in a vector database, and uses a hosted large language model (LLM) to generate natural language answers.

2. Web & System Applications

i. Academic Assistance Platform

A platform inspired by EssayPro and Edusson, built to streamline academic service workflows.

- Implemented real-time task tracking, automated deadline calculations, and internal quality checks.

ii. School Management System

A multi-tenant school management system for local schools.

iii. School and Hospital Management System.

Deployed across Marengoni Technical College and Sisto Mazzoldi Level 4 Hospital.

- Customized PHP-based system for academic and healthcare workflows, including local hosting.
- Provided offline-first deployment, online backup automation, and remote support.

iv. Real Estate Application.

Part of Cytonn team enhancing a real estate website frontend and backend.

- Maintained Vue.js frontend with Laravel APIs.

v. Bursary Management System.

Academic project to streamline scholarship application and approval processes.

- Built using Django with user authentication and workflow stages for approvals.

SKILLS

1. Technical Skills

i. Web & Backend Development

- React.js
- Next.js
- Flask
- Django
- Vue.js
- Laravel
- Node.js
- PHP

ii. Programming Languages

- Python
- JavaScript
- SQL

iii. Cloud & DevOps

- AWS
- Digital Ocean
- Nginx
- Apache

iv. Version Control & CI/CD:

- Git
- GitHub
- GitLab

2. AI & Automation Tools

- RAG
- Vector Search
- Vector DB
- LLM intergration
- TypingMind
- Airtable Automations
- Make.com
- N8n
- Embeddings

3. Workflow & Project Tools

- Trello
- Citrix Director
- Notion

- Jira
- Slack
- Google Workspace
- Agile Project Management

4. Other Core Competencies

- Prompt Engineering & API Integration
- Business Process Automation
- System Deployment & User Training
- Voice Assistant Development
- No-Code/Low-Code Workflow Design
- Data Collection & System Customization

CERTIFICATIONS & COURSES

- AI & LLM Development
 - LangChain for LLM Application Development – DeepLearning.AI
 - Prompt Engineering for Developers – OpenAI & DeepLearning.AI
- Software & Cloud Development
 - Python Essentials 1 & 2 – Cisco Networking Academy
 - AWS Cloud Practitioner Essentials – AWS
 - Linux Shell Scripting for DevOps – Coursera
- Design & Project Management
 - Foundations of User Experience (UX) Design – Google / Coursera
 - Agile Project Management – Google / Coursera

TRAININGS AND BOOTCAMPS

- Django Web Development with Python by Power Learning Project (PLP).
- Cybersecurity and Emerging Technologies Awareness Training by ICTA
- HCIA Security by Huawei.

REFERENCES

❖ **John Karimi** *jkarimi@cytonn.com*

HR, Cytonn Investments, 2022

❖ **Simon Siva** 0727870371

Senior Full Stack Developer, Cytonn Investment, 2022

❖ **Collins Norman**254721764805 / 254724275330

CTO, Research Solutions Network, 2023

collinspark1985@gmail.com

❖ **Hezron Kakiya** 0774492610

Deputy Branch Manager, NHIF - Kitale, 2021