

JULIUS MATHEKA CHARLES

Software Engineer | Full-Stack Developer | Data Scientist | AI Engineer

Nairobi, Kenya | +254 719 537 813 | cjmatheka@gmail.com | github.com/msnzilu | linkedin.com/in/julius-charles24b91b89

PROFESSIONAL SUMMARY

Dynamic full-stack developer and AI enthusiast with proven expertise in building scalable web applications, integrating AI/ML solutions, and optimizing data pipelines. Excelled in collaborative remote environments at FinTech Innovations Ltd., delivering high-impact features that reduced load times by 20% and enhanced user experiences. Proficient in Python/Django and Java/Spring backend ecosystems, React/NextJS frontends, and tools like LangChain and TensorFlow, with a strong foundation in Agile methodologies, GitHub CI/CD, and Docker. Eager to leverage logical problem-solving, self-directed learning, and mentorship-driven growth to contribute innovative, user-centric solutions in a remote-first internship setting.

SKILLS

- Full-Stack:** Python, Django, Django REST Framework, RESTful APIs, Java, Spring Boot Framework, PostgreSQL, MySQL, NextJS, React Native, HTML/CSS, JavaScript (eager to expand into Angular)
 - Version Control & Tools:** Git/GitHub, git actions, Docker, Linux, Bash/Shell Scripting,
 - Data/AI/ML:** Machine Learning (TensorFlow), LangChain/OpenAI, SQL, ETL Pipelines (Apache Airflow), Data Visualization (Tableau, Power BI)
 - Soft Skills:** Problem-Solving, Agile Collaboration, Self-Paced Learning, Logical Thinking
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EXPERIENCE

Junior Full-Stack Developer Intern | *FinTech & Innovations Ltd* | *Remote* | Jun 2024 – Dec 2024 (6 months)

- Collaborated with a 5-person remote engineering team and product managers to develop and test backend APIs for a mobile payment tracking app, contributing to 3 key features from design to deployment.
 - Wrote clean, documented code for user authentication and data endpoints in Python, Java and JavaScript; debugged and resolved 15+ integration issues with ReactJS frontend, reducing load times by 20% through query optimizations in PostgreSQL.
 - Developed and tested **Java/Spring Boot RESTful APIs** for payment processing endpoints, ensuring thread-safe handling for high-concurrency transactions in a FinTech context.
 - Participated in daily Agile stand-ups and bi-weekly code reviews using GitHub, incorporating senior feedback to improve code quality and adopt best practices like modular testing with pytest.
 - Assisted in incorporating emerging tools like basic Docker containers for local development, while troubleshooting cross-browser compatibility in JavaScript components for QA handover.
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PERSONAL/PROFESSIONAL PROJECTS

AI Agent Platform MVP (Ongoing) | Web-Based AI Agent Creation & Automation Tool | <https://github.com/msnzilu/agents47> | <https://agents47.online>

- Building a scalable MVP for creating/deploying AI agents in business use cases (support, research, sales) via a 12-week phased plan: Django backend, WebSockets chat, RAG knowledge mgmt.
- Progress: Early user testing with real-time responses (<3s latency) and 85%+ test coverage; demonstrates full-stack/AI integration from auth to async tools.

Key Tech:

- Django 5.x/DRF (APIs/auth),
- PostgreSQL/pgvector (vectors/search),
- LangChain (agents/RAG/tools/memory),
- OpenAI/Claude (LLMs/embeddings),
- HTMX/Alpine/Tailwind (UI),
- Channels/Redis (real-time),
- Celery (async),
- PyPDF2/docx (parsing),
- Chart.js/Sentry (analytics/monitoring),
- GitHub Actions/Docker (CI/CD/devops),
- Locust/Selenium/pytest (testing/linting).

E-Commerce Backend API | Java/Spring Boot REST Service

- Developed a scalable backend for inventory management with user roles, integrating PostgreSQL for data persistence and JWT for authentication.
- Key Tech: Spring Boot, JPA/Hibernate, PostgreSQL, JUnit, Maven, Docker.

EDUCATION

ALX Africa | Professional Certification – Software Engineering | Jan 2024 – Feb 2025 (Completed)

- Excelled in self-paced modules on full-stack development, algorithms, and web frameworks; capstone: Collaborative deployment of a Django/React app with Git version control.
- Capstone: Collaborative deployment of a Java/Spring-based API integrated with a React frontend.
- Tools: C, Python, JavaScript, Java, Git, SQL.

Moringa School | Professional Certification – Data Science | Jan 2023 – Nov 2023 (Completed)

- Mastered problem-solving in ML and data pipelines; group project: Built an ETL system for real-time analytics using collaborative tools.
- Tools: Python, SQL, TensorFlow, Tableau.

Zetech University | B.Sc. Computer Science | 2019 – 2023

- Developed core programming, algorithmic, and systems design skills through coursework in data structures, software engineering principles, and database management—directly building a foundation for full-stack development, problem-solving in code, and collaborative project work.
- Key Projects: Implemented algorithms for simulation models and team-based software prototypes, enhancing debugging and version control proficiency.

Masinde Muliro University | B.Sc. Disaster Management and International Diplomacy | 2012 – 2016

- Built foundational logical thinking for crisis analysis and team-based problem resolution.
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PROFESSIONAL CERTIFICATIONS

- **IBM** | ETL and Data Pipelines with Shell, Airflow, and Kafka | 2024 o Automated workflows for scalable data handling in full-stack environments.
 - **IBM** | Getting Started with Data Warehousing and BI Analytics | 2024 o Designed BI solutions with visualizations for collaborative insights.
 - **IBM** | Hands-on Introduction to Linux Commands and Shell Scripting | 2024 o Enhanced version control and automation skills for remote development.
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REFEREES

- Available on Request