SHARON MWIKALI KITAVI

AI Research Engineer | Applied ML & Human-Centered AI

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SUMMARY

MS student in Engineering Artificial Intelligence at Carnegie Mellon University with a strong mathematical foundation in linear algebra, calculus and statistics, now deepening linear algebra in Mathematical Foundations of ML. Builds and evaluates ML systems end to end, from a real-time multilingual NLP pipeline and a ReAct agent built with LangChain and LangGraph to a hackathon-winning clustering model, and studies how people interact with AI through user research and situated studies. Seeking a Summer 2027 internship/research fellowship.

EDUCATION

MS, Engineering Artificial Intelligence | Carnegie Mellon University Africa *Aug 2026 – Present*

- **Coursework:** Mathematical Foundations of ML (linear algebra), Data, Inference & Applied ML, Research Methods

BSc, Computer Science | Catholic University of Eastern Africa *Sep 2022 – 2026*

- **Relevant:** Linear Algebra, Calculus, Statistics, Neural Networks, Big Data Programming (Apache Spark)

AI PROJECTS

Field Note Copilot — Agentic AI Capstone (04-801) *Oct 2026 – Present*

- Building a ReAct agent with LangChain and LangGraph that reasons step by step and calls tools to turn raw field notes into structured, verified outputs and insights.
- Own the data access layer and the cross-check engine that verifies the agent's outputs against source records before they reach users.

SautiNet — Real-Time Multilingual NLP Platform *Jan – Mar 2026*

- Built a distributed, real-time pipeline with PyTorch models that ingests and classifies political sentiment in English, Swahili and Sheng social media, handling noisy, code-switched, low-resource text at streaming scale.

SmartHive AI — 1st Runner-up, Kenya Inter-University AI Hackathon *Oct – Nov 2024*

- Built and evaluated a clustering model for customer segmentation with scikit-learn; led data cleaning, EDA and statistical analysis in Python.

Big Data Programming — Distributed Data Processing | CUEA *2025*

- Processed and queried large datasets in Scala on Apache Spark with distributed transformations and aggregations.

EXPERIENCE

Product Analyst / Data Product Manager | VettedAI *Jan 2026 – Jun 2026*

- Worked with engineers and product managers on an AI recruitment platform, building PostHog dashboards to monitor feature adoption and usage of AI features in production.
- Planned and ran user interviews and recruiter feedback sessions, then analyzed qualitative and behavioral data to explain how people used AI features and prioritize changes.

Information Technology Intern | Isuzu East Africa Limited *May 2025 – Jul 2025*

- Led development and deployment of a cross-platform PowerApps tool for 300+ users, iterating on user feedback and cutting requisition time by 40%; automated workflows with Power Automate.

Human-Centered AI Research | Carnegie Mellon University Africa *2026 – Present*

- Designing a situated study of how women and health workers in Rwanda interact with and trust AI screening tools in breast cancer care, starting with a critical audit of existing tools.

SKILLS

Mathematics & Statistics: Linear algebra, calculus, statistics, statistical inference and data analysis

LLMs & Generative AI: LLM agents, ReAct agents, LangChain, LangGraph, retrieval-augmented generation (RAG), agent orchestration and tool integration (n8n)

ML & NLP: PyTorch, scikit-learn; neural networks, NLP for multilingual and code-switched text, clustering, EDA

Research Methods: User interviews, situated and contextual user research, qualitative and quantitative analysis, AI auditing

Programming & Data: Python (object-oriented, Pandas), Java, SQL, Scala, R, C, JavaScript; Apache Spark, Firebase

Deployment: Docker, PostHog monitoring of AI features in production

Tools: Git, Jupyter, Power BI, Microsoft Power Platform

CERTIFICATIONS & LEADERSHIP

- **ALX Data Science Certification**(12 months, 2024 – 2025) | **BlueDot Impact, The Future of AI** (2026)
- **IBM CIC Tech Talent Series** — one-week training at IBM Research Africa (2024) | IBM Code the Future (2024)
- **Sololearn Intermediate** – Python & SQL
- Campus Director, Hult Prize CUEA (2024 – 2025)