# LEONARD JOMBO

**Computer Scientist | NLP for Low-Resource African Languages | Software Engineering**
Kisumu, Kenya · +254 700 785 496 · leonardjombo6@gmail.com · jomboi8.davida.ink · github.com/jomboi8

## PROFESSIONAL SUMMARY

Computer scientist (Maseno University, 2026) building language technology for low-resource African languages. Created *Dawida*, a published mobile app in which community members contribute and vote to verify Taita (Kidaw'ida) words, sentences and audio; built *TaitaCLIR*, a cross-lingual retrieval system over English, Kiswahili and Taita, at the Princeton in Kenya Global Seminar and co-authored a paper on Taita cross-lingual retrieval presented at Microsoft Kenya. Software engineering foundation in Go, Python, REST APIs and databases, plus applied cybersecurity experience.

## EDUCATION & RESEARCH PROGRAMS

**Bachelor of Science in Computer Science**, Maseno University, Kenya*September 2022 – May 2026*
Artificial Intelligence, Machine Learning, Natural Language Processing, Information Retrieval, Software Development, Distributed Systems, Cloud Computing, Databases, Computer Networks.

**Princeton in Kenya Global Seminar**, Princeton University*May – July 2026*
Six-week research program on NLP and technologies for low-resource languages. Built TaitaCLIR and co-authored with teammates the paper *"SokoTalk: Cross Lingual Information Retrieval for Taita Markets"*, presented at Microsoft Kenya.

**Proposed MSc research:** Machine translation and NLP for low-resource African languages, particularly Kidaw'ida, exploring how linguistic structure, cross-lingual transfer and community-curated data can support under-resourced languages.

## RESEARCH & SELECTED PROJECTS

**Dawida — Community-Driven Taita Language Documentation App** | *Flutter, Dart, Go, PostgreSQL, SQLite* · Google Play · Backend
- Built and published a mobile app for building digital language resources for Kidaw'ida (Taita), a Bantu language of Kenya's Taita Hills.
- Designed a crowdsourcing workflow for words, meanings, example sentences and pronunciation audio, with community voting to verify submissions, laying the groundwork for a human-validated language dataset.
- Implemented offline-first storage with background sync; built the Go/PostgreSQL backend storing contributions and verification votes.

**TaitaCLIR — Cross-Lingual Information Retrieval for Taita** | *Python, multilingual sentence transformers, FAISS, Streamlit* · GitHub
- Built a cross-lingual semantic search system that lets users query in English, Kiswahili or Taita, using multilingual sentence embeddings and FAISS vector retrieval behind a Streamlit interface.
- Worked with structured JSON language data; examined obstacles to low-resource search, notably scarce clean, structured data.

**Kairo — Real-Time Collaboration Platform** | *Go, React, PostgreSQL, WebSockets* · Live · GitHub
- Multi-user tracker with Kanban boards, timelines and live presence; Go WebSocket service broadcasting concurrent updates over PostgreSQL.

**Mawora — Farm Management Application** | *Flutter, Dart, Go, PostgreSQL* · GitHub
- Offline-first app replacing paper records with tracking of production, inventory, sales and expenses; REST API secured with JWT, role-based access control and input sanitization.

## PROFESSIONAL EXPERIENCE

**Cybersecurity Intern** — Redynox*February 2026 – April 2026*
- Assessed production REST APIs for access-control, authentication and input-validation flaws (OWASP API Top 10); documented fixes.

**Cybersecurity Researcher** — HackerOne*October 2025 – Present*
- Vulnerability research via disclosure programs: backend logic, API boundaries, access control (recon, fuzzing, manual testing).

**Cybersecurity Lead** — Google Developer Student Club, Maseno University*September 2025 – Present*
- Lead cybersecurity and secure-coding workshops for more than 100 students and organize industry talks.

**Software Developer Intern** — Mawora Poultry Farm*May 2025 – September 2025*
- Built and deployed farm management software in Go, PostgreSQL and Flutter replacing paper-based tracking; developed REST APIs with JWT, role-based access control and input sanitization.

**IT Facilitator** — Mulisa Education Centre*January 2023 – Present*
- Teach foundational programming and digital safety to young learners.

## CERTIFICATIONS & TRAINING

Cisco Networking Academy: Introduction to Cybersecurity (2025), Networking Basics (2025) · Udemy: Backend Development MasterClass, Golang, Databases and Cloud (2025) · PortSwigger Web Security Academy: SSRF, Authentication and Access Control Labs

## TECHNICAL SKILLS

**Languages:** Go, Python, TypeScript/JavaScript, SQL, Dart, Bash, C · Human languages: English, Kiswahili
**ML & NLP:** Cross-lingual information retrieval, multilingual sentence embeddings, FAISS vector search, low-resource data curation
**Backend & Systems:** REST APIs, WebSockets, distributed systems, microservices; Fiber, Gin; PostgreSQL, SQLite, Supabase, NeonDB
**Tools & Security:** Flutter, Git, Docker, CI/CD, AWS, Linux; OWASP Top 10, API security testing, JWT/OAuth2, Burp Suite, Wireshark