

MALAMA MASHEKE

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EDUCATION

B.S. Computer Information Systems

Expected Graduation: December, 2029

Livingstone College | HBCU | Salisbury, NC | January 2026 - Present

- **Achievements/Grades:** Presidential Scholar | Honors Student | GPA: 4.0
- **Coursework:** Computer Systems, Intro to Programming, Python Programming, Calculus
- **Harvard CS50:** Introduction to Computer Science
- **Oak Academy (Udemy):** Python Programming: Machine Learning and Deep Learning

TECHNICAL PROJECTS

Dēmos | Voting Platform with Data-Layer Authorization

July 2026

Collaborative Project, 2 Developers

demos-rust-eight.vercel.app

- **Stack:** PostgreSQL, Row-Level Security, Authorization Design, Authentication and Session Modeling, Least-Privilege Enforcement, Multi-Tenant Data Modeling, TypeScript, Next.js, Supabase
- Designed and implemented the authorization model for a multi-tenant voting platform: 40 Row-Level Security policies across 12 tables and 30 security-definer functions, scoping every session, ballot, and result to the workspace and identity permitted to access it.
- Enforced access control at the data layer rather than in application code, so permission rules hold on every query path and cannot be bypassed by a future feature; pinned search_path on every privileged function.
- Identified and closed a ballot-secrecy vulnerability in my own schema: two tables could be joined through a shared key to reconstruct who voted for what. Replaced the exposed reference with a per-call anonymized ballot key that preserves ranked-choice grouping but cannot be traced back to a user identity.
- Built the authentication and session model, including anonymous guest sessions with an upgrade path that preserves the user id so prior votes stay attached to the account.

Spectrum Sizzle Workshop | Baylor University, SMART Hub

June 2026

NSF-Funded Workshop - Selected as 1 of 40 Undergraduates Nationwide

- **Stack:** MATLAB, Communication Systems and Modulation, Signal Processing, Frequency Allocation Analysis, Radar Systems, Spectrum Policy
- Was one out of 40 students selected from a national applicant pool for an intensive workshop led by Google and Keysight engineers, covering how wireless systems transmit, encode, and share a contended medium.
- Completed modules in modulation, frequency allocation analysis, spectrum policy, and radar systems, implementing signal analysis routines in MATLAB against measured data.

Tri-Ask-Me | AI Support Triage Agent

May 2026

HackerRank Worldwide Hackathon - Top 10% Globally

- **Stack:** Python, Amazon Bedrock, Retrieval-Augmented Generation, TF-IDF, Prompt Engineering, Escalation Policy Design
- Built a terminal-based AI agent that triages real support tickets across three product ecosystems (HackerRank, Claude, and Visa), delivered in a 24-hour hackathon and placed in the top 10% globally.
- Architected a modular pipeline of retriever, classifier, responder, and orchestrator services, with TF-IDF retrieval over a local support corpus grounding every generated response in source documentation.
- Designed the escalation decision matrix routing security concerns, account access issues, and data privacy and compliance requests to specialist review rather than auto-answering, with over 30 keyword triggers and a documented justification on every decision.
- Enforced anti-hallucination guarantees through retrieval grounding checks, constrained system prompts, and low-temperature inference on Amazon Bedrock, refusing to answer when no supporting documentation was retrieved.

COMMUNITIES & LEADERSHIP

- **ColorStack Member:** National community of Black and Latinx students in computing.
- **Adobe Student Ambassador:** Selected to represent Adobe on campus, running peer education and live technical demonstrations.

ADDITIONAL SKILLS

- **Languages:** Python, C, JavaScript/TypeScript, SQL, MATLAB
- **Foundations:** API Design, Client-Server Architecture, Query Design, Machine Learning and Deep Learning
- **Tools:** Git and GitHub, Version Control and Collaborative Workflows, Command Line (Bash), VS Code, Jupyter Notebook, Google Colab

AWARDS & RECOGNITION

- **HackerRank Worldwide Hackathon:** Top 10% Globally out of over 15,000 participants
- **Odessa J. Robinson Scholarship:** Promise City Church
- **Lwengu School, Monze, Zambia (Jan 2019 - Nov 2021):** Class Salutatorian | Overall Best in Mathematics | Leadership Award | Exemplary Conduct Award

Portfolio: <https://portfolio-chi-blond-81.vercel.app>