

Miguel Shema Ngabonziza

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EDUCATION

Grambling State University

B.S. Computer Science, Minor in Cybersecurity GPA: 4.00/4.00

Grambling, LA

Aug 2024 – May 2028

- Honors: Presidential Scholarship, 2x Dean's List, Alpha Lambda Delta Honors
- Relevant Coursework: Data Structures & Algorithms, Software Engineering, Probability & Statistics, Calculus I & II

TECHNICAL SKILLS & LANGUAGES

Languages: Python, JavaScript, TypeScript, Go, Java, C++, SQL, R

Frameworks: React, FastAPI, Node.js, Next.js, scikit-learn, TensorFlow, PyTorch, Pandas, NumPy

Tools: Git, GitHub, Docker, AWS, Linux, SQLite, Vercel, Jupyter Notebook, Playwright, Hugging Face

AI/ML: Machine Learning, Deep Learning, Computer Vision, Voice Biometrics, Agentic AI, LLM Integration

EXPERIENCE

AI and Automation Trainee

May 2026 – Present

One37 Solutions Inc.

Remote

- Building multilingual voice biometric authentication and deepfake detection models in Python, shipping production-ready AI/ML features alongside senior engineers
- Developing automated testing and benchmarking pipelines across devices and acoustic environments to validate model robustness and ensure production reliability

Non-Profit Consulting Extern

May 2025 – Jul 2025

Extern (PwC Collaboration)

Remote

- Analyzed donor engagement data and Gen Z trends to produce recommendations projected to increase outreach effectiveness by 40%, presenting findings to PwC collaborators

PROJECTS

PlantGuard-AI | Python, PyTorch, ResNet18, Microsoft Foundry IQ, Azure AI Search, FastAPI, Gradio, Azure OpenAI, torchvision
Nov 2025 – Jan 2026

- Built a reasoning agent that diagnoses crop disease from a leaf photo using a 95%-accurate ResNet18 classifier (38 classes, 14 crops) and a multi-step differential-diagnosis loop grounded in Microsoft Foundry IQ
- Engineered parallel Azure AI Search retrievals per candidate diagnosis with cited agronomy sources and a deterministic economic-exposure estimator, built for the Microsoft Agents League hackathon

Vocalyx | Python, FastAPI, PyTorch, React, Vite, SpeechBrain, Hugging Face Transformers, Whisper, ECAPA-TDNN, Wav2Vec2, SQLite, JWT, Vercel, Cloudflare Tunnel
May 2026 – June 2026

- Designed and shipped a full-stack voice authentication MVP in 11 days: React/Vite frontend on Vercel, FastAPI backend with JWT auth, and SQLite persistence
- Built a multi-stage inference pipeline fusing ECAPA-TDNN speaker verification, a Wav2Vec2 deepfake classifier, and Whisper liveness into a single adaptive decision layer

Sign Language Bridge | React, TypeScript, WebRTC, AWS, Amazon Nova, Bedrock, Polly, Transcribe, MediaPipe, OpenCV
Feb 2026 – Mar 2026

- Built a real-time ASL-to-speech platform with React (TypeScript) and AWS serverless infrastructure (API Gateway, Lambda, DynamoDB, S3) at an Amazon Nova Hackathon
- Integrated Amazon Nova multimodal models, Polly, and Transcribe with a MediaPipe/OpenCV gesture pipeline for AI-powered sign interpretation and voice synthesis

DeliveryRadar | Go, SQLite, Gmail API, Google OAuth2, Discord Webhooks

Mar 2026 – Apr 2026

- Engineered a self-hosted Go daemon consuming Gmail's REST API via OAuth2, parsing multi-carrier tracking numbers with a 3-tier regex strategy and pushing Discord notifications
- Architected a SQLite persistence layer with WAL-mode concurrency, deduplication logic, and exponential backoff, validated by 45 unit tests for reliable multi-carrier tracking

PROGRAMS & CERTIFICATIONS

Programs: HBCU First Day-One-Ready Academy Intern, The Lantern Network Mentee, New Seasons Youth Program

Certifications: Google AI Essentials Specialization, AWS Educate Machine Learning Foundations, Supervised Machine Learning: Regression and Classification, Software Engineer Intern Certificate with HackerRank