

WANCHI LUCIA YEN

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PROFESSIONAL SUMMARY

AI researcher, entrepreneur, and project manager with experience building AI products and early-stage ventures. Founder of YEN Pastries and founding member of ECHO, an AI-powered multilingual voice translation startup. Experienced in product strategy, customer-centered problem solving, mentorship, and cross-functional team leadership. Currently pursuing a Master of Science in Engineering Artificial Intelligence at Carnegie Mellon University Africa.

EDUCATION

Carnegie Mellon University Africa

Kigali, Rwanda

Master of Science in Engineering Artificial Intelligence — GPA: 3.88/4.0

2025 – 2027

Relevant Coursework: Tech Startup Tools and Foundations, Engineering AI Project Method, AI System Design, Introduction to Deep Learning, Natural Language Processing, Data Inference and Applied Machine Learning.

Relevant Entrepreneurship & Innovation Training: Tech Startup Tools and Foundations (CMU Africa), Introduction to Design Thinking (Queen's University), Introduction to Customer Discovery (Queen's University), High-Performance Teams (Queen's University).

University of Buea

Buea, Cameroon

Bachelor of Technology in Computer Engineering — GPA: 3.58/4.0

2022 – 2025

ENTREPRENEURIAL EXPERIENCE

ECHO

Product Demo — Kigali, Rwanda

Founding Member, Project Manager & Low-Resource Language Researcher

2025 – Present

- Co-founded an AI startup developing real-time multilingual voice translation technology designed to improve cross-language communication.
- Coordinate cross-functional teams spanning AI research, software engineering, product design, and deployment.
- Lead product planning, feature prioritization, roadmap discussions, and execution for an AI-powered voice translation platform.
- Conduct user-focused research on low-resource language communities to guide product strategy and market positioning.
- Bridge technical and non-technical stakeholders to align product development with customer needs and business goals.
- Present product progress, user insights, and development updates to mentors, collaborators, and stakeholders.

YEN Pastries

Business Page

Founder

2019 – 2022

- Founded and operated a food-service venture specializing in pastries, cakes, and event catering services.
- Led customer acquisition, product development, pricing strategy, marketing, and day-to-day business operations.
- Trained and mentored junior bakers and trainees, emphasizing skills development and service excellence.
- Managed customer relationships, order fulfillment, and delivery logistics across diverse client segments.
- Grew the brand's online presence to over 1,100 followers through social media engagement and community building.

PROFESSIONAL EXPERIENCE

Vision & Language Lab, CMU Africa, WAKANDA AI

Kigali, Rwanda

Graduate Research Assistant

Oct 2025 – Present

- Design and implement end-to-end speech translation pipelines for Bantu languages, focusing on improving translation quality and reducing cascading errors.
- Build PyTorch data pipelines and distributed training workflows while supporting collaboration among researchers, engineers, and student contributors.
- Conduct rigorous experimentation, hyperparameter optimization, and reproducibility studies to ensure reliable model performance.

SKILLS

- **Entrepreneurship & Product:** Startup Development, Customer Discovery, Product Strategy, Lean Validation, Market Research, Business Model Development, Venture Operations, Product-Market Fit Analysis.
- **Leadership & Communication:** Project Management, Team Leadership, Technical Mentorship, Stakeholder Communication, Public Speaking, Cross-functional Collaboration, Workshop Facilitation.

- **Artificial Intelligence:** Machine Learning, Deep Learning, Multimodal Transformers, Speech Translation, Automatic Speech Recognition (ASR), Text-to-Speech (TTS), Natural Language Processing.
- **Technical Tools:** PyTorch, Hugging Face, Git, Python, Scikit-learn, MediaPipe, Distributed Training, Weights & Biases, LaTeX.
- **Languages:** English (Native), French.

SELECTED RESEARCH PROJECTS

AI4EAC Skills2Job Challenge (Zindi)

1st Place Overall (#1 Across 8 African Countries)

- Built a machine learning ranking system that predicts the five most relevant occupations from structured skill profiles.
- Optimized recommendation quality using mAP@5 and developed validation strategies robust to leaderboard distribution shifts.
- Achieved 1st place overall across competitors from eight African countries.

Multimodal CASL Recognition

CASL-TransNet: 80.39% Signer-Independent Accuracy

Under Review: Deep Learning Indaba 2026

- Developed a privacy-preserving transformer architecture for Central African Sign Language recognition using pose-only representations.
- Implemented rigorous signer-independent evaluation protocols across 19 unique participants to ensure real-world generalization.
- Achieved state-of-the-art performance while reducing model footprint to 99MB for deployment in resource-constrained environments.

Distilling Intelligence from Noise

Under Review: Interspeech 2026

- Built a synthetic data generation and distillation pipeline for low-resource Kinyarwanda speech technologies.
- Fine-tuned a 1B-parameter audio language model to improve intelligibility and robustness on human-held-out evaluations.
- Released reproducible datasets and evaluation protocols to support transparent benchmarking in African language technologies.

LEADERSHIP & SERVICE

- **Communication Minister**, Africa Innovators Society, Carnegie Mellon University Africa (2025–Present)
- Mentor and collaborator on interdisciplinary AI and innovation projects within the CMU Africa community.

ACHIEVEMENTS

- **Queen's University (Dunin-Deshpande Innovation Centre)** — Innovation Certifications Design Thinking, Customer Discovery, High-Performance Teams (2026)
- **1st Place Winner**, Tartan Innovate Hackathon, CMU-Africa (2025)
- **Mastercard Foundation Scholar**, Carnegie Mellon University Africa
- **1st Place Overall**, AI4EAC Skills2Job Challenge (Zindi)
- **Top 20% Finalist**, International Youth Math Challenge (2025)
- **Certified in Cybersecurity (CC)**, ISC2
- **SOC Tier 1 Training Graduate**, Cybersafe Foundation