Nchofon Tagha Ghogomu

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SUMMARY

Master of Science in Information Technology concentrating on Applied Machine Learning and background bridging hardware, autonomous systems, data operations, and research. Brings hands-on experience managing cross-functional data workflows from interfacing engineering and business teams at Orange Cameroon, to building and leading drone systems operations at Quadrant 2E, now Sparte Robotics

Program Management | Research | Data Operations | AI/ML | Cross-functional Collaboration

Education

Carnegie Mellon University, Master of Science, Information Technology May 2026

- *Concentration:* Applied Machine Learning

Ecole Nationale Supérieure Polytechnique de Douala, MEng. Industrial Robotics July 2022

- *Concentration:* Automation and Industrial System Control

Experience

Research Assistant, Carnegie Mellon University – Wood Neuro Research Group. Jan 2026 – Present

- Conducted research to understand and model cognition in patients with sickle cell disease using neurological and physiological signals and machine learning.
- Collected and prepared FMRI data from CMU-Pitt Brain Imaging Data Generation & Education (BRIDGE) Center for synthesis and machine learning pipelines, contributing to a record of over 30 participants.

Research Assistant, CMU-Africa – AI Healthcare Research Lab. Feb 2025 – Aug 2025

- Developed an explainable arrhythmia classification model of macro-F1 score of 0.95 using gradient-based signal attribution on 5s ECG data from the MIT-BIH Dataset.
- Explored 60+ research papers from 2015 to 2025 to outline machine learning-based analysis of ECG and PCG signals for rheumatic heart disease detection.nal ML/DL approaches used in classifying heart diseases.

Data Manager, Orange Cameroon – OMCM, Orange Graduate Program May 2023 – May 2024

- Liased engineering and data user teams, resolving access issues and defining clearer data ownership and workflows across Orange Money´s big data ecosystem.
- Coordinated delivery of 4 major data products to improve data access, storage, conformity, and cross-team usability, managing stakeholders from technical and business sides end-to-end.
- Spearheaded a process automation initiative to streamline Orange Money reconciliation pipelines (B2W/W2B), reducing manual effort and cutting access latency for downstream users.
- Led business team implementation of Near-Real-Time data access [MOOD V2], eliminating 24-hour reporting delays and improving operational decision-making for internal data users.

Intelligent Systems Specialist / Intern, Quadrant 2E – now Sparte Robotics Aug 2019 – Jan 2021

- Led team of 6 in research, development, and field operations of automated and intelligent systems, combining embedded systems programming and AI.
- Pioneered and delivered company´s first professional drone pilot training program, a foundation for all subsequent curricula.
- Designed and owned drone repair and servicing workflow, authoring company´s first repair guideline document with step-by-step diagnostics, QA protocols, and test checklists for incoming DJI drones.
- Partnered with local agencies, for example, the Douala City Council, to deliver drone services, and supervised interns building drones and other autonomous systems.

Publications and Preprints

Bridging the Trust Gap: Interpretable AI for Clinical Decision Support in Arrhythmia Diagnostics March 2026

NT Ghogomu, DE Olatunji, CP Mukamakuza.

IEEE/CVF Winter Conference on Applications of Computer Vision, Tucson, AZ

Machine Learning-Based Analysis of ECG and PCG Signals for Rheumatic Heart Disease Detection: A Scoping Review (2015-2025) May 2025

DE Olatunji, JD Zannu, CP Mukamakuza, GN Uiso, MMM Aman, JB Thuo, C Buol, ***NT Ghogomu***, E Umubyeyi

Computer Methods and Programs in Biomedicine Update

Zero-Shot Neural Priors for Generalizable Cross-Subject and Cross-Task EEG Decoding Jan 2026

BB Jean Jacques , Brandone Fonya, ***NT Ghogomu***, Pauline Nyaboe, Kipngeno Koech

Proceedings of Machine Learning Research – Under Review

Projects

Advancing Digital Twins for Urban Mobility in Sub-Saharan Africa: Feature-Based Road Classification. 2025

- Conducted CV research project on urban mobility at CMU-Africa, developing a deep learning model for real-time road feature classification in Kigali to support the creation of digital twins for Sub-Saharan African cities.

Design and Prototyping of a Medical Device for Automatic Health Data Collection, Storage and Management - The Health Pad. (MEng Thesis) 2022

- Engineered a medical tablet for doctors, with 5 embedded clinical sensors to enhance patient consultation, real-time data acquisition and storage, and effective medical follow-up.
- Interacted with medical teams in over 12 hospital departments, including the OR, to grasp conventional medical practices, modern technologies, IT processes, and health data management.

Technologies and Experience

Programming languages: Python | MATLAB | C++ | SQL | JavaScript

ML & Data Technologies: Pytorch | TensorFlow | Keras | Numpy | Pandas | Matplotlib | Scikit-learn | Spark

Hardware & Embedded Systems: Raspberry Pi | DJI Drone Systems

Language: English | French

Relevant Coursework: Mobile Big Data Analytics and Management | Introduction to Machine Learning | Applied Deep Learning | Research Methods in Engineering | Neural Signal Processing

CITI Program Certifications: Biomedical Research - Basic/Refresher | Research Security Training | Biomedical Responsible Conduct of Research Course