

DILLION AMARTEY

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Profile

Computer Science graduate of the University of Ghana with undergraduate research in computer vision and deep learning, studying how silhouette-based input representations affect CNN performance in gait recognition. Complemented by product management experience at Huawei Technologies and full-stack engineering, including a multi-tenant platform I am building on my own.

Education

University of Ghana, Legon

Bachelor of Science, Major: Computer Science

Legon, Accra

February 2025

Final-year project: *The Impact of Silhouette Feature Representation on Gait Analysis* (supervisor: Dr Aziz Abdullah Dwumfuor)

Research Interests

Computer Vision · Visual Representation Learning · Deep Learning · Machine Learning · Image Processing

Research Experience

Undergraduate Research Project

University of Ghana, Legon

Researcher (with Jake Sompah Asamoah; supervised by Dr Aziz Abdullah Dwumfuor)

November 2023 – January 2025

- Studied how compressing a walking sequence into one image affects CNN-based gait recognition, comparing five silhouette representations (GEI, GEnI, GFI, MSI and the proposed DEWGI) on CASIA-B normal walking (124 subjects, 11 views).
- Implemented the feature-extraction pipelines and trained DenseNet and ResNet classifiers on every representation under matched settings (Python, TensorFlow/Keras, OpenCV).
- Proposed DEWGI, fusing gait energy, entropy and motion; it ranked first with DenseNet (92.34%) and ResNet (88.17%).
- Reworked a GaitSTAR-based model in PyTorch (appearance and optical-flow fusion, channel attention, auxiliary classifier), reaching 98.71% best recorded accuracy on the project's within-subject split.
- Wrote the methodology and results chapters; published the code and a case study on the evaluation's limits.

Professional Experience

Huawei Technologies

Osu, Accra

Software Product Manager

October 2024 – August 2025

- Technical point of contact between business stakeholders and engineering teams for enterprise platforms, including AI Contact Centre (AICC) and Convergent Billing System (CBS).
- Reviewed UI flows, system behaviour and performance metrics with engineers to resolve usability and workflow issues.
- Facilitated Agile cross-functional planning and kept specifications focused on maintainable, scalable implementation.

Hedge Pensions Trust

Osu, Accra

Systems & IT Officer

February 2022 – April 2023

- Maintained business-critical internal systems and diagnosed infrastructure and application issues across the network.
- Designed structured backup and recovery processes that improved data security and reliability.

Projects

Progresso – School Management Platform

Accra

Sole Developer

February 2026 – Present

- Building a multi-tenant platform for Ghanaian Primary and JHS schools, with role-specific tools for administrators, teachers, front desk staff, parents and pupils; preparing for a pilot.
- Designed per-school data isolation: schools resolve from their web address, tokens must match, and services get only pre-scoped database access; migrated the seven highest-risk services, closing cross-school gaps found en route.
- Go (Fiber), React, TypeScript, PostgreSQL, Redis and Docker; private file storage on Cloudflare R2 with malware scanning, quotas and retention; end-to-end tests on desktop and mobile.

Technical Skills

Languages: Python, Go, TypeScript, JavaScript, PHP, HTML5, CSS3.

Machine Learning and Computer Vision: CNNs (DenseNet, ResNet), attention, feature engineering, image processing; PyTorch, TensorFlow/Keras, OpenCV, scikit-learn, NumPy, pandas.

Engineering: React, Node.js, Fiber, Flask, Laravel; REST APIs, microservices; PostgreSQL, MySQL, Redis; Docker, Git, CI/CD.

Certifications

- Google Project Management Professional Certificate – Agile (Coursera)

January 2026