

# Oluwatimilehin Emmanuel Owolabi

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## Education

**Covenant University - B.Eng. in Electrical Engineering**

GPA: 4.85/5.00 (*First Class Honours*)

Ogun, Nigeria

September 2020 – August 2025

## Core Skills

**Machine Learning:** PyTorch, TensorFlow, JAX, LangChain, LangGraph, OpenCV, Hugging Face, MLflow, Weights & Biases

**Programming & Systems:** Python, C++, MATLAB, Git, Linux, Docker, AWS, Raspberry Pi, STM32, ESP32

**Robotics & Control:** ROS2, MuJoCo, JAX, Model Predictive Control, Optimal Control, Sensor Fusion

**Personal Skills:** Leadership, Hyper-focus, Resilience, Growth Mindset, Teamwork

## Work Experience

**Scrella**

Lagos, Nigeria

**Lead Machine Learning Engineer**

July 2024 – December 2024

- Designed and deployed machine learning operations pipelines to optimize workflow efficiency.
- Used Vision Language Models for confidential video analysis, improving workers decision speed.

**University of Oxford — Dr. Daniel Omeiza, Oxford Robotics Institute**

Oxford, United Kingdom (Remote)

**Machine Learning Research Assistant**

March 2024 – September 2024

- Analyzed the Lyft Level 5 dataset to estimate multi-agent vehicle positions and velocities, detect lane-change maneuvers, and improve explainability of autonomous driving decisions in complex traffic scenarios using both ego- and agent-centric representations.
- Implemented subset-scan algorithm on Graph Neural Networks to identify statistically significant anomalies in datasets.

**Peak Fiction**

Belfast, Northern Ireland (Remote)

**Machine Learning Intern**

April 2024 – July 2024

- Utilized Latent Diffusion Models to create high-quality comic book scenes.
- Engineered an Image Generation workflow using ComfyUI, increasing productivity by 50%.

**Google Developer Groups on Campus**

Ogun, Nigeria

**Robotics Research Team Lead**

September 2024 – Present

- Trained a vision-based manipulation policy using DeepMind Control Suite, MuJoCo Playground, and JAX, achieving reliable box-picking performance in simulation.
- Prototyped a low-cost 3D-printed manipulator for object sorting, matching the performance of the WidowX 250 S at just 2.5% of its cost; concurrently supervised mechanical, electrical, and software teams.
- Led the replication of the ALOHA paper in simulation, using OpenVLA-OFT to teach students bimanual manipulation with vision-language-action models.
- Mentored 16 students on critical review and implementation of robotics research papers, deepening their understanding and improving replication accuracy.

**Zummit Africa**

Lagos, Nigeria

**Machine Learning Research Intern**

April 2023 – May 2024

- Designed a brain tumor segmentation application, achieving 95% accuracy using U-Net and medical imaging datasets.

## Leadership Experience

**Association of Electrical and Information Engineering Students**

Ogun, Nigeria

**President**

September 2024 – Present

- Led a 20-member executive team in coordinating projects and competitions for over 2,000 students.
- Launched a student mentorship program pairing juniors with seniors for academic and career guidance.

## Volunteer Experience

**Enactus**

Ogun, Nigeria

**Member (National Champions)**

May 2021 – May 2023

- Designed a soil-nutrient sensor circuit for the “Cow Blood to Manure” sustainability project.
- Contributed to the Pet City initiative which uses recycled plastic bottles to make interlocking road tiles.
- Supported the Bargass project which involves converting plant biomass waste into reusable food packs.

Awards and Honors

Finalist, Pan-African Robotics Competition	2024
Third Place, DSN Covenant University Hackathon (\$30)	2022
Founder’s Award, Best WASSCE Result, Wellspring College (\$50)	2021
Valedictorian, Department of Science, Wellspring College (\$100)	2020
Salutatorian, Overall Graduating Class, Wellspring College (\$100)	2020
Lux Award, Most Intellectual Student, Wellspring College	2020

Selected Projects

Autonomous Delivery Quadcopter	Ongoing
• Designed and constructed a custom ESP32-based flight controller hardware and software.	
Action Recognition and Tracking System	2023
• Developed an action-recognition and tracking system using a hybrid CNN-LSTM model for monitoring and logging patient actions, detecting falls, and issuing emergency alerts, integrated with a PID controller for subject tracking.	

Selected Presentations and Invited Talks

From Campus to Career: Navigating the Engineering Journey
Redeemer’s University Electrical and Electronic Engineering Students’ Association, April 2025
AI: Our Current Reality and Future Trajectory
Nigerian Society of Engineers (NSE), August 2024
Deep Learning: Neural Networks
Association of Professional Women Engineers of Nigeria (APWEN), April 2024

Selected Certifications

Deep Learning Specialization Certificate	Coursera / DeepLearning.AI
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