

AYOTOMIWA DAVID OYEWUMI

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EDUCATION

Covenant University

Bachelor of Engineering in Electrical Engineering

Ogun State, Nigeria

Sept 2022 – Aug 2027 (Expected)

- **CGPA:** 4.86/5.00
- **Relevant Coursework:** Control Systems, Software development Techniques, Engineering Mathematics (Linear Algebra), Probability theory and Statistics

CORE/RELATED RESEARCH INTERESTS

Reinforcement Learning, Artificial Intelligence applications to Robots, Natural Language Processing

RESEARCH EXPERIENCE

Google Developer Groups on Campus

Robotics Track Member

Jan 2025 - Present

1. Low-Cost 6-DOF Robotic Manipulator Development
 - Designed and prototyped a 6 degree-of-freedom robotic arm for autonomous object sorting, achieving comparable performance to the \$4,000 Widow 250X manipulator at <60% of the cost
 - Implemented inverse kinematics algorithms for accurate end-effector positioning and trajectory planning
Technologies: Python, MuJoCo, Inverse Kinematics, Arduino/STM32, Fusion 360
 - **GitHub:** [Link](#)
2. Vision-Based Robotic Manipulation Policy
 - Developed vision-based manipulation policy using DeepMind Control Suite, MuJoCo Playground, and JAX to enable reliable pick-and-place performance in simulation.
 - Implemented deep learning models that autonomously detect and lift boxes, laying groundwork for scalable robotic manipulation with minimal supervision
 - Contributed to codebase used by 16+ students for robotics research implementation
Technologies: Python, JAX, MuJoCo, DeepMind Control Suite, OpenCV
 - **GitHub:** [Link](#)
3. Research Paper Implementation & Review
 - Critically analyzed and implemented some robotics research papers focusing on topics such as manipulation, RL for robotics, etc.
 - Collaborated with 16-student cohort to reproduce experimental results and identify practical limitations of published methods

PROJECTS

BYIT E-Commerce Platform

August, 2025

- Developed a full-stack mini e-commerce web application using vanilla **PHP**, **MySQL**, and **JavaScript** during my internship at VAS2NETS Technologies Limited.
- Implemented user authentication, product catalog, shopping cart, and order management system - Designed responsive UI for seamless mobile and desktop experience
- Technologies: PHP, MySQL, JavaScript, HTML/CSS

- **Github:** [Link](#)

USUMM – YouTube-to-Blog AI Converter

December, 2025

- Developed a full-stack web application using **Python** and **Flask** to transform YouTube video feeds into structured, professional blog articles using the **Gemini 1.5/2.5 Flash** models.
- Integrated **YouTube Data API v3** to fetch user subscriptions and search results, handling complex JSON responses to extract video metadata and creator details.
- Architected a resilient backend by implementing **exponential backoff** algorithms to manage API rate limits (\$429\$ errors) and transient server failures, increasing application stability by **30%**.
- Engineered advanced **prompting strategies** to ensure high-fidelity content generation, maintaining the creator's "voice" while formatting output in clean, injectable HTML.
- Implemented secure user authentication using **OAuth 2.0**, managing session tokens to provide a personalized and secure dashboard for 100+ channel subscriptions.
- **Github:** [Link](#)

PROFESSIONAL EXPERIENCE

VAS2NETS Technologies Limited *Web-development Intern*

Lagos, Nigeria
Aug 2025 - Sept 2025

- Developed full-stack e-commerce web application (BYIT) using vanilla PHP, Code-Igniter framework, and MySQL.
- Optimized database queries therefore improving user experience
- Implemented RESTful APIs for product loading, carts, and other functionality.
- Built responsive front-end interfaces using JavaScript, HTML5, and CSS3
- Gained hands-on experience with version control (Git), debugging, and production deployment workflows

CORE SKILLS

Programming Languages: Python (Scripting, Robotics), C (Firmware), PHP, Javascript, SQL

Robotics & Simulation: Mujoco, ROS, Inverse Kinematics, Motion Planning

Machine learning & Artificial Intelligence: OpenCV, Numpy, Scikit-learn, Matplotlib, JAX

CAD: Autodesk Fusion 360, AutoCAD

Web Development: PHP, Code-Igniter, MySQL, HTML/CSS, JavaScript

AI APIs: Gemini API

Embedded Systems: STM32, Arduino, Microcontrollers, Sensor/Actuator Interfacing

Tools: Git/GitHub

ADDITIONAL:

- **Languages:** English (Native), Yoruba (Conversational), French (Basic - currently learning)
- **Interests:** Music (Multi-Instrumentalist: Piano, Saxophone, Steel Drum), Calisthenics, Track & Field

PRESENTATION TALKS

Google Developers Groups' Tech Fest.

Covenant University, July, 2025

- Presented a 6-DOF robotic manipulator project to 50+ attendees including students and industry professionals.
- Demonstrated live pick-and-place capabilities and discussed technical implementation challenges

CERTIFICATIONS

FREECODECAMP -

- [Responsive Web design](#)
- [Javascript Algorithms and Data Structures](#)
- [Scientific Computing in Python](#)
- [Data Analysis with Python](#)

COURSERA -

- Specialisations:

- [Reinforcement learning Specialisation](#)
 1. [Fundamentals of Reinforcement learning](#)
 2. [Sample - based learning methods](#)
 3. [Prediction and Control with Function approximation](#)
 4. [A Complete Reinforcement Learning System \(Capstone\)](#)

Alberta University, 2025

- Courses:

- [Understanding Research methods](#)

University of London, 2025