

Aduragbemi ADETUNJI

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PERSONAL PROFILE

Robotics engineer with 3+ years of experience in robotics research and development. Performing research projects in robotics and IoT. My areas of interest are in robotics (unmanned underwater and surface vehicles), system integration, dynamic systems modelling & control, vision-guided robotics, autonomous mission, and path planning.

EDUCATION

Norwegian University of Science and Technology (NTNU)

August 2023 - Present

Masters in Marine & Maritime Intelligent Robotics (MSMIR) with Erasmus+

- Marine Control Systems
- Enabling Technology for Marine Ecological and Marine Sciences Studies
- Cyber-Physical Networked Vehicle System
- Digital Twin Based Health Monitoring System

Specialisation Project: Development and Testing of Low-Speed Observer and Control Law for Blueye Drone

University of Toulon, La Garde, France

September 2022 - June 2023

Masters in Marine & Maritime Intelligent Robotics (MIR) with Erasmus+

- Geometry, Kinematic and Dynamic Modelling of Robotic Systems
- Control Theory of Multivariable Systems
- Artificial Intelligence - Machine Learning, Deep Learning, Reinforcement Learning
- Fundamentals of Marine and Coastal Processes
- Underwater Acoustics
- Innovation, Design Thinking and Project Management

University of Ibadan, Ibadan, Nigeria

2015 - 2020

Bachelor of Science (B.Sc.), Electrical and Electronic Engineering (First Class)

- Completed courses in Digital System Design, Linear Systems, Signal Processing, Microprocessor Application, Organization & Embedded Systems, Servomechanism, and Control Systems.
- Awarded Dean's Honors four consecutive times.
- Served as the Career Fair Committee Head.
- The final undergraduate project was aimed to replace mechanically driven lawnmowers with robotic ones in the University Community.

Thesis: Design and Construction of a Solar Powered Robotic Lawnmower

Amazing Grace International College, Ibadan, Nigeria

2008 - 2014

West African Senior School Certificate (WASSCE)

- Valedictorian, class of 2014
- Senior Prefect, class of 2014

WORK EXPERIENCE

Information and Systems Laboratory (Robotics Intern)

June 2023 – August 2023

Computer Science and Systems Laboratory at University of Toulon

- Modelling, Identification & Control of ROV Systems
- Assembly of the BlueROV1
- Work principle of the hardware and software integration of the BlueROV1
- 3D Simulation of the BlueROV1 Hydrodynamic Model with Simulink 3D Animation(MATLAB)
- Testing of Control Laws

Robotics and Artificial Intelligence Nigeria (Researcher/Course Facilitator)

June 2020 – September 2022

Robotics and Artificial Intelligence Training Facility

- Taught Advanced Control Theories for Mobile Robots

- Designed and deployed Unmanned Aerial Vehicles for varying applications
- Designed and fabricated Printed Circuit Boards (PCBs)
- Supervised robotics and IoT projects
- Worked on Arduino, raspberry pi projects using C++, python, and Robots Operating System (ROS).

TotalEnergies Nigeria Limited, Lagos. (Information Technology Intern)

September 2018 - February 2019

A multinational energy company

- Trained at the onshore facility on the control and automation processes.
- Interned at the Information Systems and Telecommunication Department
- Troubleshoot for faults in the user access and distribution layers of the enterprise network
- Provided hardware and software solutions to computer networking problems.
- Involved in enterprise collaboration infrastructure and applications (audio conference and videoconference).

Xybet Solar Technology, Ibadan. (Technical Intern)

February 2018 - April 2018

Alternative Energy Solutions Company

- Installed inverter and solar systems.
- Repaired and maintained inverter and solar systems.
- Recommended power solutions with inverter systems.

SELECTED RESEARCH PROJECTS

- Drone based Carbon Emission Tracking for Human enclave Detection (DB-CETHED)
- Position control of a drone in 3D-space (longitude, latitude, and altitude).
- Self-balancing robot with Kalman and complementary filters.
- PID control for an auto-level unmanned aerial vehicle.
- Wireless communication using NRF modules and HC-12.
- Water level monitoring and control.
- Automated home using ESP8266, google cloud, and voice control with google assistant.

SKILLS

- **Programming languages and mathematical packages:** Python, MATLAB & Simulink, Arduino, C++, Ardupilot, Git, Github, OpenCV, DroneKit
- **Softwares:** Gazebo, RVIZ, QGroundControl, Mission Planner, Processing, MS office (Word, Excel, PowerPoint)
- **Platforms:** Linux (Ubuntu), Windows, ROS
- **Computer-aided design/Engineering:** Proteus, Fritzing, Solidworks
- **Hardware:** MCUs (Arduino, ESP32), Micro Processors (Nvidia, Raspberry pi), PIXHAWK, Sensors.

AWARDS, TRAINING AND CERTIFICATION

Udemy

ROS for Beginners: Basics, Motion and OpenCV

Design and Development of Internet of Things (IoT) System

Full Stack Web Development Certificate

May 2021

June 2019

MTN Foundation

Science & Technology Scholarship Scheme Award

September 2018

SEPLAT Petroleum Development Company PLC

NNPC/SEPLAT Scholarship Scheme

March 2018

Automation and Engineering Academy

Introduction to PLC, Sensors & Activators, Conveyor Technology, Programming with Ladder

August 2016

Olu-Tech Engineering

Hardware & Software troubleshooting and repairs

September 2015 to February 2016

REFEREES

Available on request.