

FAROOQ OLANREWAJU

PhD Student, King Fahd University of Petroleum and Minerals
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EDUCATION

PHD, SYSTEMS AND CONTROL ENGINEERING

King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia 08/2024 – Till Date

ERASMUS MUNDUS JOINT MASTER, MARINE AND MARITIME INTELLIGENT ROBOTICS (MIR)

Bologna Master, Electrical and Computer Engineering

Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal 09/2023 – 08/2024

Grade 16.80/20 [Equivalent 4.00/4.00]

Thesis Enhanced Multi-Robot Manipulation Algorithm for Underwater Application. *Advisors:* Prof. Pedro Sanz, and Prof. Rodrigo Ventura.

Master, Engineering of Complex Systems (Marine and Maritime Intelligent Robotics Specialization)

Université de Toulon, La Garde, France 09/2022 – 08/2023

Grade 16.87/20 [Equivalence: 3.71/4.00]

Rank 2/21

BACHELOR OF ENGINEERING, MECHANICAL ENGINEERING

University of Ilorin, Ilorin, Nigeria 11/2015 – 10/2021

Grade 4.85/5.00 – First Class Degree (Honors).

Rank 1/97

Thesis Development of a Small Unmanned Aerial System for Aerial Surveillance and Package Delivery Applications. *Supervisor:* Assoc. Prof. H. A. Ajimotokan

SKILLS

Programming Python, MATLAB.

Toolkits PyTorch, Simulink, ROS, Gym, git, MiniConda, Linux, LaTeX (Overleaf).

Robotics Control Theory, Robot Dynamics, State Estimation, Modelling and Identification, Data Analysis, Computer Vision, Transfer Learning, Reinforcement Learning, Cyberphysical and Decision Systems.

Languages English (advanced), Yoruba (native), Arabic (intermediate).

RESEARCH EXPERIENCE

RESEARCH SUPPORT STAFF

Research Centre in Robotics and Submarine Technologies (CIRTESU), Jaume I University 09/2023 – 07/2024

Topic Enhanced multi-robot manipulation algorithm for underwater application: exploring cooperative manipulation and transportation of slender rigid objects in underwater environments

Supervisors Prof. Pedro Sanz, Prof. Rodrigo Ventura.

Tools Used C++, Python, ROS, Bash.

ROBOTIC RESEARCH INTERN

Laboratoire d'Informatique et Systèmes (LIS), Université de Toulon 06/2023 – 08/2023

Topic Implementation of Model Predictive Control for BlueROV (a remotely operated underwater vehicle)

Supervisors Dr Nicolas Boizot, Martin Filliung.

Tools Used Python, ROS, CasADI, DoMPC library

TECHNICAL CONSULTANT

Technical Assistantship for PhD Project in Teesside University, Middlesbrough, UK 03/2021 – 09/2022

Project Simulation of Wireless Sensor Networks under different mobility conditions.
Tools Used MATLAB

UNDERGRADUATE RESEARCH ASSISTANT

Department of Mechanical Engineering, University of Ilorin 10/2019 – 08/2021

Thesis Development of Small Unmanned Aerial System [[Manuscript](#)].
Supervisor Dr Ajimotokan H. A.
Tools Used Ansys, SolidWorks, ArduPilot.

TEACHING EXPERIENCE

DATA SCIENCE AND ANALYTICS LEAD INSTRUCTOR

LEADVision Academy, Nigeria 03/2021 – 05/2021

Courses Introduction to Python Programming; Python Data Science Libraries: NumPy, Pandas, Matplotlib;
Machine Learning with Scikit-Learn; Data Ingestion and Web-Scrapping.

TEACHING ASSISTANT

(Volunteering Service at) Department of Mechanical Engineering, University of Ilorin

Courses MEE 505 – Advanced Computer Programming [08/2021 – 10/2021, 01/2023 – 03/2023]
MEE 361 – Engineering Mathematics [08/2021 – 10/2021].
MEE 353 – Thermodynamics and Heat Transfer [08/2021 – 10/2021]

PROJECTS

GRASP PLANNING ALGORITHM FOR UNDERWATER ROBOT COOPERATION

Research Centre in Robotics and Submarine Technologies (CIRTESU), Jaume I University 02/2024 – 07/2024

Tools Used ROS (Python & C++), Open3D, Docker, Bash.
Advisors Prof. Pedro Sanz, Prof. Raul Sanchez, Prof. Antonio Morales.

AUTONOMOUS SCHEDULING OF SELF-DRIVING VEHICLES

AI and Decision Systems Course, Instituto Superior Técnico. 09/2023 – 11/2023

Repository <https://github.com/olanrewajufarooq/SharedVehicleScheduling>
Coordinator Prof. Rodrigo Ventura
Tools Used Python

AUTONOMOUS DOCKING AND UNDERWATER TREASURE SEARCH WITH BLUEROV

Robotics Challenge, Jaume I University. 03/2023 – 06/2023

Repository <https://github.com/olanrewajufarooq/BlueROVCompetition>
Advisors Prof. Pedro Sanz, Prof V. Hugel.
Tools Used ROS (Python), OpenCV, Unity Engine (Provided Simulator used).

TRAJECTORY PLANNING AND AUTONOMOUS CONTROL OF BLUEROV

Marine and Maritime Intelligence Robotics, Université de Toulon. 01/2023 – 04/2023

Repository <https://github.com/olanrewajufarooq/MIRBlueROV>
Coordinator Prof V. Hugel, Prof. V. Creuze, Prof. C. Anthierens, Prof. C. Dune.
Tools Used ROS (Python).

VERTICAL STABILITY CONTROL OF AUTONOMOUS UNDERWATER VEHICLE

Marine and Maritime Intelligence Robotics, Université de Toulon. 11/2022 – 01/2023

Repository <https://github.com/olanrewajufarooq/MIRAUVSimulator-ControlTheory>
Coordinator Mr. Aurelien Dhaisne.
Tools Used MATLAB, Simulink.

MODELLING AND SIMULATION OF AUTONOMOUS UNDERWATER VEHICLE

Marine and Maritime Intelligence Robotics, Université de Toulon.

11/2022 – 01/2023

Repository <https://github.com/olanrewajufarooq/MIRUnderwaterRobotics>

Instructors Dr. Mathieu Richier

Tools Used MATLAB, Simulink.

OCEANOGRAPHIC ANALYSIS OF PRIMARY DATA FROM MEDITERRANEAN SEA

Marine and Maritime Intelligence Robotics, Université de Toulon.

10/2022 – 01/2023

Repository <https://github.com/olanrewajufarooq/OceanographyAnalysis>

Instructors Prof. Anne Molcard

Tools Used Python, Folium, Pandas, Matplotlib, MATLAB.

MODELLING AND SIMULATION OF A HEXABOT LEG

Marine and Maritime Intelligence Robotics, Université de Toulon.

10/2022 – 01/2023

Repository <https://github.com/olanrewajufarooq/MIRHexabotLeg>

Instructors Prof. Cedric Anthierens

Tools Used MATLAB, Simulink.

OBJECT DETECTION IN MARINE CONTEXT

Marine and Maritime Intelligence Robotics, Université de Toulon.

11/2022 – 12/2022

Repository <https://github.com/olanrewajufarooq/MIRHexabotLeg>

Instructors Prof. Ricard Marxer

Tools Used Python, PyTorch.

SOME ONLINE COURSES

DEEP LEARNING SPECIALIZATION, DEEPLARNING.AI, COURSERA (4 CERTIFICATIONS)

Courses: [Neural Networks and Deep Learning](#), [Improving Deep Neural Networks](#), [Structuring Machine Learning Projects](#), [Convolutional Neural Networks](#).

MATLAB FOR ENGINEERS AND SCIENTISTS, VANDERBILT UNIVERSITY, COURSERA (2 CERTIFICATIONS)

Courses: [Introduction to Programming with MATLAB](#), [Mastering Programming with MATLAB](#).

MATHWORKS CERTIFICATIONS (3 CERTIFICATIONS)

Courses: [MATLAB Onramp](#), [Simulink Onramp](#), [Control Design Onramp with Simulink](#).

IBM DATA SCIENCE PROFESSIONAL CERTIFICATION, COURSERA (9 CERTIFICATIONS)

Courses: [Tools & Methodology](#), [Python for AI](#), [Database & SQL](#), [Data Analysis](#), [Data Visualization](#), [Machine Learning](#), [Capstone Project](#).

STATISTICS WITH PYTHON SPECIALIZATION, UNIVERSITY OF MICHIGAN, COURSERA (3 CERTIFICATIONS)

Courses: [Understanding and Visualizing Data](#), [Inferential Statistical Analysis](#), [Fitting Statistical Models](#).

IBM CERTIFICATIONS, COURSERA (3 CERTIFICATIONS)

Contents: [Deep Neural Networks with PyTorch](#), [Hands-On Introduction to Linux Commands and Shell Scripting](#), [Getting Started with Git and GitHub](#).

AWARDS AND HONORS

Erasmus Mundus Scholarship, Marine and Maritime Intelligence Robotics (MIR) Master. [03/2022]

Best Graduating Student in Mechanical Engineering, University of Ilorin. [10/2021]

FSB National Awards, Federal Scholarship Board, Nigeria. [12/2020]

Co-Winner, MainOne AI Competition. [2020]

Agbami Medical and Engineering Professionals Scholarship Award, Deep Water Petroleum Limited, Nigeria. [03/2017]

University Undergraduate Scholarship Award, University of Ilorin. [02/2017, 01/2018, 2019, 02/2020]