

# Adeleke Olorunnisola

📍 Nigeria    ✉ orolunnisola01@gmail.com    ☎ +2348143879386    🌐 orolunnisola.netlify.app    in LinkedIn  
🏠 Github

## Skills and Expertise

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**Languages:** Python, C/C++, Arduino, SQL

**Technologies & Tools:** TensorFlow, PyTorch, OpenAI Gym, ROS2, Docker, Git (version control), API development, Machine Learning, Deep Learning, Computer vision, Reinforcement Learning, Gazebo, Control system and SolidWorks

**Soft Skills:** Analytical mindset, troubleshooting skills, Agile development methodologies, Strategic thinking and problem-solving mindset

## Education

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**Federal University of Technology, Akure**  
*Bachelors in Mechanical Engineering*

*Jan 2014 – Nov 2018*  
GPA: 3.89/5.0

**Federal University of Technology, Akure**  
*Masters in Mechanical Engineering*

*May 2023 – April 2025*  
GPA: 4.51/5.0

## Experience

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### Robotics Engineer

*Freelance*

*Freelance*

*Mar 2021 – Present*

- Developed and deployed AI-driven robotic solutions for automation, leveraging machine learning and motion planning techniques.
- Designed and implemented ROS-based robotic control systems for autonomous navigation and manipulation.

### Process Engineer

*Ibadan, Nigeria*

*Extreme Manufacturing Nigeria Limited*

*Jan 2022 – Dec 2022*

- Achieved significant improvements in detergent production efficiency, cost reduction, and product quality through data-driven process optimization.
- Designed and implemented process changes that increased overall production efficiency.
- Supervised operators and production personnel to ensure consistent high-quality production of detergents, liquid wash, and soap.

### Engineering Intern

*Ibadan, Nigeria*

*Henkel*

*Apr 2019 – Dec 2019*

- Coordinated with vendors to ensure successful execution of quality projects, maintaining high standards and adherence to specifications.
- Led plumbing maintenance initiatives, collaborating with technicians to ensure system reliability and performance.
- Conducted comprehensive risk analyses for all projects to enhance safety and mitigate potential hazards.

### Operations Intern

*Ibadan, Nigeria*

*British American Tobacco Nigeria*

*Jun 2017 – Dec 2017*

- Applied lean manufacturing principles to optimize production processes, increasing efficiency and reducing waste.
- Implemented targeted process changes that reduced production costs and enhanced product quality, streamlining operations.

## Selected Certifications

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**SolidWorks Design Certifications – 2 Courses**

[View Certificates](#) 

*Dassault Systèmes*  
2024

**Modern Robotics Specialization – 4 Courses**

[View Certificates](#) 

*Northwestern University*  
2023

**Deep Learning Specialization – 5 Courses**

[View Certificates](#) 

*DeepLearning.AI*  
2023

**Machine Learning Specialization – 3 Courses**

[View Certificates](#) 

*Stanford University*  
2022

## Selected Projects

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**Containerized Object Detection Deployment with Streamlit**

[Github repository](#) 

- Developed a real-time object detection system where multiple users can simultaneously analyze and annotate detected objects on a shared interface, with synchronized updates across all users.
- Tools Used: Python, Docker, Streamlit

**Obstacle Avoidance and Motion Planning Algorithms: A\*, PRM, and RRT Implementations**

[Github repository](#) 

- Developed a motion planning framework implementing A\*, PRM, and RRT algorithms for obstacle avoidance, enabling efficient pathfinding and real-time navigation in dynamic environments.
- Tools Used: Python

**Facial Landmark Detection and Visualization Using Face Mesh**

[Github repository](#) 

- Developed a Face Mesh-based facial landmark detection system that identifies and visualizes key points on a face from images or video inputs
- Tools Used: Python

**Simultaneous Localization and Mapping of a constructed environment using turtlebot3**

[Simulation video](#) 

- Implemented a Simultaneous Localization and Mapping (SLAM) system using TurtleBot3 to autonomously map a constructed environment.
- Tools Used: Python, ROS, C/C++

**Meta-Heuristic Optimization Algorithms Based PID Controller Design For A 5-DOF Robotic Manipulator**

[Webpage link](#) 

- Optimized a PID controller for a 5-DOF robotic manipulator using meta-heuristic algorithms to enhance stability, precision, and dynamic response.
- Tools Used: Matlab, Arduino

## Selected Publications

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**Model Predictive Control for Advanced Path Tracking and Stabilization in Autonomous Mobile Robots Using Linearized Kinematic and Dynamic Models**

Oct. 2025

*Adeleke Olorunnisola, et., al*

[Pdf Link](#) 

**Development and Performance Evaluation of a Quadcopter**

Dec. 2020

*Adeleke Olorunnisola, et., al*

[Pdf Link](#) 