NASIR NASIR-AMEEN

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PROFESSIONAL SUMMARY

Robotics Software Developer with an MSc in Robotics and hands-on experience building AI-enabled robotic systems using **Python, ROS/ROS2, computer vision**. Proven ability to translate research concepts into deployable systems across mobile robots, quadruped platforms, and backend services. Strong foundation in software design, robotics, middleware, and applied machine learning. Seeking remote or hybrid roles in **Robotics Software Engineering, AI Engineering, or Python/Backend Development**.

CORE SKILLS

Programming & Software

- Python (advanced), MATLAB, JavaScript, HTML
- Object-Oriented Programming (OOP), async programming, REST APIs
- Software design principles, debugging, testing

Robotics & AI

- ROS (advanced), ROS2 (intermediate)
- Mobile robots , AMR AGV robots & AGV robots
- SLAM, navigation, perception pipelines
- Computer vision with OpenCV
- Deep learning with PyTorch / TensorFlow / Keras
- YOLO (v5/v8) for real-time object detection

Systems & Tools

- Linux (robotics & firmware environments)
- Gazebo simulation
- Databases: PostgreSQL, MongoDB, MySQL

Collaboration

- Remote collaboration
- Technical documentation
- Cross-disciplinary teamwork

PROFESSIONAL EXPERIENCE

Robotics Software Developer

Smart Future Labs — Abu Dhabi, UAE (On-site)
Sep 2023 – Oct 2023

- Developed and tested **ROS-based robotic software modules** for perception and autonomous navigation.
- Integrated **AI-driven decision-making components** into robotic control pipelines.
- Worked within a **Linux ROS environment** to ensure reproducible deployments.
- Collaborated with hardware and AI engineers on robotic system integration and testing.
- Supported simulation-to-real transfer using Gazebo and real robot platforms.

Web / AR Developer

Lzyutes Brand — Remote
Jul 2022 – Sep 2022

- Built a web-based **Augmented Reality (AR) application** to enhance customer engagement.
- Developed front-end components using **JavaScript, HTML, and AR.js**.
- Integrated **QR-code-driven AR experiences** for product interaction.
- Collaborated on the design and maintenance of **RESTful APIs**.
- Optimized application performance and scalability for production use.

PROFESSIONAL DEVELOPMENT & INDEPENDENT PROJECTS

Oct 2023 – Present

- Strengthened expertise in **Python, robotics software architecture, and AI fundamentals**.
- Designed and simulated **ROS/ROS2-based robotic systems** using Gazebo.
- Built modular perception and control pipelines for autonomous robots.
- Studied **software design patterns, system reliability, and distributed systems**.
- Developed portfolio-ready projects focused on real-world robotics and AI applications.

EDUCATION

M.Sc. Robotics

Heriot-Watt University — Dubai, UAE
Sep 2022 – Sep 2023

- Focus areas: Robotics middleware, AI for robotics, autonomous systems
- Hands-on projects involving ROS, simulation, and real robot platforms

B.Eng. Computer Engineering

Afe Babalola University — Ado-Ekiti, Nigeria
Sep 2017 – Jul 2022

SELECTED PROJECTS

Robot Dog Guide for the Visually Impaired

- Designed a real-time **computer vision pipeline using YOLO** on a Unitree Go1 quadruped robot.
- Converted visual detections into **audio feedback** to assist visually impaired users.
- Integrated perception, inference, and feedback modules within a ROS-based architecture.

Disaster Response Autonomous Robot

- Developed an autonomous mobile robot using **ROS and Gazebo**.

- Implemented **environment mapping, navigation, and hazard detection**.
- Designed the system to identify danger signs and estimate the number of individuals in disaster zones.

AI-Enabled Retail Store Management Robot

- Built an AI-powered robotic system using **ROS and YOLOv5**.
- Automated product stock detection, location tracking, and customer guidance.
- Focused on real-time perception and decision-making in dynamic environments.

Artificial Neural Network for Solar PV Power Prediction

- Built a machine learning model using **Scikit-learn, Pandas, TensorFlow, and Keras**.
- Predicted solar inverter power output efficiency.
- Logged and visualized prediction data through a mobile application.

CERTIFICATIONS

- Adobe Certified Associate (ACA) — Web Development
- SoloLearn HTML Certification

LANGUAGES

- English — Fluent

REFERENCES

Available upon request.