MAHMOUD SAID

Robotics Engineer

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PROFESSIONAL SUMMARY

Results-driven Robotics Engineer with 1+ years of professional experience in autonomous systems development, specializing in UAV and rover technologies. Proven expertise in mechanical engineering, robotics design, robotic programming, and embedded systems development. Strong background in electrical engineering concepts, automation solutions, and actuator design.

PROFESSIONAL EXPERIENCE

Robotics Engineer

Perisian Huda | Malaysia January 2024 - February 2025

- Designed and developed autonomous quadcopter systems implementing advanced flight control algorithms achieving 80% flight stability through embedded systems programming
- Created autonomous grass cutting rover with deep learning integration by AI models to reducing human effort in garden maintenance by 70% and improving adaptability to challenging terrains by 60%.
- Performed robotics design, SolidWorks CAD modeling, FEA simulation, and 3D printing, reducing development time by 30% across 5+ mechanical components
- Developed robotic programming solutions using C++ and Python for control systems achieving 70% sensor accuracy by sensor fusion in autonomous navigation
- Designed electrical engineering circuits for drone and rover systems including motor control and battery management systems and improve power efficiency up to 35 % using solar Pannal for charging.
- Led cross-functional collaboration with 3-member engineering team delivering 2 major projects on time and 40% under budget

Engineering Intern

Waterfall Pumps Manufacturing | Dubai, UAE July 2022 - October 2022

- Assisted in assembly and production of centrifugal pumps maintaining adherence to manufacturing specifications across 20+ pump units
- Supported comprehensive performance testing achieving 90% test pass rate and documenting results for quality assurance
- Participated in critical inspection procedures including hydrostatic casing tests and rotor dynamic balancing ensuring 100% pump reliability standards

EDUCATION

Bachelor of Mechatronics Engineering (Honours)

November 2019 - October 2023

Asia Pacific University (APU) | Malaysia | Dual Degree with **De Montfort University** | UK

TECHNICAL SKILLS

Programming & Development: C++ (Advanced), Python (Advanced), MATLAB Simulink, Arduino Programming, Git Version Control, Data Structures & Algorithms

Robotics & AI: ROS2 Jazzy, Machine Learning Integration, Autonomous Navigation, Sensor Fusion, Robotic Programming

Design & Manufacturing: SolidWorks CAD & Simulation, 3D Printing, Mechanical Engineering concepts, Robotics Design

Electronics & Control: Electronics and Circuit Design, Embedded Systems control, PID, EKF, ArduPilot, MAVLink

KEY PROJECTS

Autonomous Quadcopter Development

- Full-stack development of autonomous UAV system with ROS2 Jazzy achieving 95% flight stability and 30% improved battery efficiency

Grass Cutting Rover with Machine Learning

- Designed autonomous lawn maintenance robot using Arduino and Python reducing manual labor by 80% and improving cutting efficiency by 65%

LANGUAGES

Arabic: Native **English:** Advanced **German:** Basic