# Abdelrahman Hazem Khalil

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Arabic: Native speaker | English: Proficient

## **Profile**

Mechatronics Engineering graduate with hands-on experience in robotics, machine vision, and embedded systems. Built real-world systems using ROS 2, ESP32, and Zebra smart cameras. Native Arabic speaker, fluent in English.

**Goal**: Seeking international R&D roles in robotics or automation to apply my skills in intelligent hardware and software systems.

### **Education**

Bachelor of Engineering (Hons.) in Mechatronics Engineering Asia Pacific University of Technology & Innovation (APU), Kuala Lumpur, Malaysia

Expected Graduation: October 2025

## **Experience**

#### **Machine Vision Intern:**

Control Easy Technology Sdn. Bhd., Malaysia (Feb 2024 – Jun 2024)

- Built a real-time defect detection system using Zebra VS40 cameras.
- Tuned vision pipeline for accurate ECU defect identification.

### Final Year Project (FYP): Al-Controlled Humanoid Robot:

Asia Pacific University (2024 – 2025)

- Developed ROS 2-based robot with voice-controlled navigation and gesture recognition.
- Integrated ESP32-based servo control, NLP chatbot, and MediaPipe gesture detection.

#### **Technical Skills**

Programming: Python, C#, MATLAB

Robotics & Embedded: ROS 2, Arduino, ESP32, Gazebo, RViz, SLAM (Basic)

Computer Vision: OpenCV, MediaPipe

Tools & Software: SolidWorks, Automation Studio, CX Programmer, CX Designer

