Muhamad Irfan Bin Muhd Ramiza

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TECHNICAL SKILLS

Fusion 360|Ansys Fluent|Granta Edupack|Computer Vision Studio|Python (Scikit-learn, Pandas, Matplotlib, Qiskit, Cirq) | MATLAB | C++/Embedded C (ChibiOS) | HTML | Pneumatic/Hydrostatic Testing | HPWJ | Lathe | Milling|3D Printing|CNC|Tap Testing|DIC|English (Fluent)|German (B1+)|Malay (Native)|

WORK EXPERIENCE

Business Development Unit Officer, RWNA Engineering Sdn. Bhd.   **Jun – Dec 2023**

•Led ESG feasibility project with Cambridge Consulting Network for oil & gas clients; coordinated 10+ stakeholders and subcontractors.

•Co-drafted company-wide NDA to strengthen IP protection in technical collaborations.

Technician, RWNA Engineering Sdn. Bhd.   ***Oct – Dec 2020***

•Conducted 30+ pneumatic/hydrostatic testing on ball, butterfly, and safety valves and precision grinding & Lapping using SL-15/SL-2 machines.

•Operated high-pressure water jetting systems & performed full disassembly/reassembly of 10+ valves.

ENGINEERING PROJECTS

Exploration & Object Tracking Using a 2 DOF E-Puck2Robot   ***Feb - March 2025***

•Engineered 3-state FSM (Search/Approach/Chase) in **embedded C on ChibiOS** using ToF/proximity sensors for collision-free tracking.

•Achieved 100% autonomous exploration success in obstacle-filled environments via sensor calibration and randomised escape logic.

Finite Element Analysis of Clevis Assembly Under Tensile Load   **March – April 2025**

•Built quarter-symmetry hex-dominant **FEA model in Ansys**; reduced simulation time 75% with <1% stress convergence at 2 mm element size.

•Validated via **Digital Image Correlation (DIC)** (<1.5% strain error in X-direction, <0.2 µm residual displacement); identified peak Von Mises stress 217.94 MPa (FoS ≈ 1.2).

Comparative Vibrational Analysis of Steam Turbine Blades   **Nov – Dec 2024**

• Performed modal analysis via tap testing (5 impacts averaged at 10 points in 5×2 grid) on three steam turbine blades; extracted first five natural frequencies and mode shapes in **MATLAB**.

• Identified fatigue risk from low damping (Q-factor 20–40, potential 40× vibration amplification); recommended **detuning from resonance** & quality-control thresholds (MAC < 0.9 or >5% frequency deviation).

Leadership Experiences

Founder, RWBI Foundation   ***June 2024 – Present***

• Founded non-profit delivering **STEM education** to underprivileged students; Organised and led electrical engineering workshop for 69 high-schoolers, achieving 84% satisfaction rate.

University Leadership Development Program , AXIATA   ***July– Aug 2025***

• Selected as 1 of only 73 from 807 applicants for prestigious 13-day intensive bootcamp (8:00AM – 11:00PM); placed 2nd runner up in CEO Challenge pitching AI-for-equitable-education strategy to C-suite executives.

Head of the UK Region, iCUBE International   **Nov 2021– Sep 2022**

•Led a 7-department UK-based division of iCUBE, overseeing recruitment of 50+ officers, Liaised with 50+ sponsors & partnerships, and pitching international initiatives to 10+ external companies.

EDUCATION

MEng Mechanical Engineering (Predicted 2:1), *University of Sheffield*   **Sep 2021 – Jun 2026**

CERTIFICATIONS & ACHIEVEMENTS

Quantum Mechanics for Engineers (Colorado)|Carbon Capture & Storage (Edinburgh)|Deep Learning & Neural| Networks(IBM)|Machine Learning(IBM)|RAG & Agentic AI(IBM)|Qiskit Fall Fest (IBM Quantum)|**Math Olympiad (SASMO): Bronze Medal** | Hackathon Winner | Varsity Track & Field | Ultra-marathon finisher | Varsity Chess |