

MUHAMMAD SHIFAU MUBARAK BIN ROSMAN

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PROFESSIONAL SUMMARY

Results-driven Aerospace Engineer with strong experience in AI-driven process optimization, Augmented Reality (AR) development, and IoT system integration. Skilled in Python, data analytics, and automation, with hands-on exposure to developing digital solutions for maintenance, repair, and operations (MRO). Adept at translating complex technical concepts into scalable, user-focused solutions. Passionate about leveraging artificial intelligence, machine learning, and data-driven innovation to enhance operational efficiency and support Singapore's smart industry transformation.

EDUCATION

Bachelor of Engineering (Hons), Aerospace Engineering

Singapore Institute of Technology (SIT) | 2020 – 2023

Diploma in Mechanical Engineering (Specialisation: Automotive & Motorsports)

Ngee Ann Polytechnic | 2015 – 2018

TECHNICAL SKILLS

Core Skills & Technical Proficiencies

- **Programming & Tools:** Python, C#, C++, SQL, MATLAB, Unity3D, TensorFlow, PyTorch, scikit-learn, Pandas, NumPy
- **AI & Data Analytics:** Data preprocessing, model training & validation, data visualization, predictive analytics
- **Engineering Tools:** AutoCAD, SolidWorks, ANSYS Fluent, MS Excel, Power BI
- **Technologies:** ARKit, IoT integration, cloud computing (AWS basics), containerization (Docker)
- **Soft Skills:** Analytical problem-solving, leadership, collaboration, adaptability, attention to detail

RELEVANT EXPERIENCE

Project Engineer (IoT & AR)

ST Engineering Aerospace Pte Ltd, Singapore | Oct 2023 – Jul 2024

- Spearheaded AI-assisted Augmented Reality (AR) applications for MRO processes, improving workflow consistency and reducing downtime by 25%.

- Designed and deployed data-driven predictive maintenance models to monitor performance anomalies in aircraft systems.
- Integrated AR and IoT technologies to enhance technician efficiency and reduce manual data entry errors.
- Collaborated cross-functionally with software, mechanical, and operations teams to develop scalable digital solutions aligned with aviation safety and quality standards.
- Authored detailed technical documentation and process validation reports for project tracking and audits.

Engineering Assistant (Intern)

ST Engineering Aerospace Pte Ltd, Singapore | Aug 2022 – Apr 2023

- Supported smart MRO innovation initiatives, contributing to AR/AI prototype development and data validation testing.
- Conducted data analysis to identify operational bottlenecks, improving workflow efficiency by 15%.
- Assisted in designing and testing machine learning-based visual inspection tools for component quality assurance.
- Prepared engineering reports and process optimization proposals for management review.

Achievements & Interests

- Led development of a cross-functional AR system enhancing MRO efficiency — showcased during ST Engineering's Smart Innovation Week 2023.
- Strong interest in AI for smart manufacturing, digital transformation, and process automation.
- Volunteer mentor for STEM outreach initiatives promoting engineering and technology careers.