

ADEEB ALQAHTANI

Software Integration Engineer

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Summary

Dynamic and results-driven Software Integration Engineer with over 10 years of experience delivering complex software integration, middleware development, and technology transformation projects, within aviation and defense sectors. Holds a Bachelor's degree in Computer Engineering and possesses expertise in advanced C++ programming, software engineering best practices and Linux-based development environments. Experienced in conducting technical site surveys, providing strategic consultations, and recommending technological upgrades aligned with international aviation standards (FAA, EASA, GACA). Passionate about leveraging technology and AI-driven solutions to optimize system performance, operational efficiency, and strategic innovation.

Experience

Rheinmetall Arabia For Simulation and Training	Riyadh
Software Integration Engineer	11/2024 - Present
<ul style="list-style-type: none">• Provided technical consultation and advanced troubleshooting support to resolve complex technical issues, optimizing system integration and performance.• Developed middleware solutions for real-time data integration, ensuring smooth communication between host systems and external modules.• Led integration of simulation and training systems, managing the complete development process from requirements to deployment.• Designed and documented system architecture for simulator upgrades and new technology adoption.• Conducted site surveys and provided solutions to improve simulator performance and align with current industry trends.	
PSAA Engineering Dpt.	Jeddah
Flight Simulator Engineer	01/2019 - 10/2024
<ul style="list-style-type: none">• Led the qualification, testing, commissioning, and certification of Full Flight Simulators, ensuring strict compliance with aviation standards(FAA, EASA & GACA).• Provided expert troubleshooting for complex technical challenges, ensuring timely resolution and minimal downtime.• Collaborated on system integration and performance optimization to improve simulator reliability and enhance operational efficiency.	
PSAA Technical Servesis Dept.	Jeddah
Flight Simulator Maintenance Supervisor(D)	01/2024 - 06/2024
<ul style="list-style-type: none">• Led a technician team to enhance operations, scheduling, and training readiness, ensuring effective coordination and smooth performance.• Monitored performance and ensured compliance with safety and regulatory standards, providing reports to support decision-making and improvements.	
PSAA Technical Servesis Dept.	Jeddah
Full Flight Simulator Technician	04/2010 - 12/2013
<ul style="list-style-type: none">• Maintained and optimized flight simulators, ensuring realistic and reliable performance for pilot training.• Configured single-board computers, modified interface cards, and upgraded I/O units for seamless system integration.• Installed, calibrated, and aligned instrument panels, visual systems, and motion platforms for enhanced realism.• Improved uptime and customized systems to meet specific training requirements through efficient troubleshooting and modifications.	

Education

California State University San Bernardino	
B.S. in Computer Engineering	01/2015 - 06/2018
<ul style="list-style-type: none">• Focused in high performance and embedded systems.	
MISK	
Deep Learning (AI) Nanodegree	08/2019 - 01/2020
<ul style="list-style-type: none">• Hands-on experience in 6 artificial intelligence projects.	
Canadian Aviation Electronics	
Intensive Training Program	05/2009 - 04/2010
<ul style="list-style-type: none">• Simulator Maintenance & English Program	
Yanbu Industrial College	
Associate Degree in Electrical and Electronics	08/2004 - 06/2008
<ul style="list-style-type: none">• Majored in instrumentation and control system.	

PROJECTS

CIGI to CIGI Middleware for Cougar Helicopter Visual IG

Developed multithreaded C++ middleware for real-time CIGI to CIGI protocol conversion. Enabled efficient data transmission and optimized communication between the host computer and image generator.

DIS-CIGI Middleware for Cougar Helicopter CGF

Developed a multithreaded C++ middleware for real-time DIS to CIGI protocol conversion between the Computer Generated Forces (CGF) and Image Generator (IG).

Servo Drive Recovery Station for 6-DOF Motion System

Engineered a specialized firmware restoration and upgrade station by integrating a dedicated PC with a controlled power management system. This solution avoided the need for a costly hardware replacement, saving the company \$95,000.

PROFESSIONAL KEY ACHIEVEMENTS



Cost Saving Of \$95K

Designed a software modification and recovery for a 6-DOF motion system, reducing downtime and saving \$95K while enhancing system readiness.



Middleware Solutions

Developed real-time, multithreaded C++ Middleware solution for Cougar Helicopter flight simulator.

WORK AWARDS



Recognized as Employee of the Month multiple times for exceptional performance and dedication.



Appreciation letter for handling a complex 6-DOF electrical motion system failure (2022).



Appreciation letter for handling a software modification for 6-DOF motion system (2022).



Appreciation letter for teaching basic electronics course(2021).



Appreciation letter for teaching basic C++ programming course (2019)

TRAINING/COURSES

1000+ hours achieved in technical training from Canadian aviation electronics, L3Harris and Collins Aerospace

PMP Course

Advance Electronics

Interface System

Electromechanical Motion and Controls

Computer Network

Python for Data Science & AI

SKILLS

Leadership and management skills: Problem-solving · Interpersonal Skills · Strategic Thinking · Time Management

Hardware: Circuit design · Electronics · Microcontrollers · Robotics · Field Programmable Gate Arrays (FPGA)

Software: C/C++ · Python · Matlab · Verilog