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

- Developed API and middleware solutions for real-time data integration, ensuring smooth communication between host systems and external modules.
- Provided technical consultation and advanced troubleshooting support to resolve complex technical issues, optimizing system integration and performance.
- 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

- 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

- 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

- 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

- Focused in high performance and embedded systems.

MISK

Deep Learning (AI) Nanodegree — 08/2019 - 01/2020

- Hands-on experience in 6 artificial intelligence projects.

Canadian Aviation Electronics

Intensive Training Program — 05/2009 - 04/2010

- Simulator Maintenance & English Program

Yanbu Industrial College

Associate Degree in Electrical and Electronics — 08/2004 - 06/2008

- 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