Dana Alrijjal

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Education

Effat University , Bachelor of Science in Computer Science — Aug 2022 – Present
- GPA: 3.98/4

Coral International School , American High School Diploma — Sept 2008 – May 2022
- GPA: 4/4

Experience

Special Educational Need Tutor, Reach Inclusion — Aug 2022 – Oct 2023
- Adapted teaching methods to meet individual learning needs, ensuring an inclusive and supportive educational environment.
- Collaborated with parents and educators to track progress and adjust learning strategies.

Papers

Alrijal, D., & AlDaghma, J. (2024). Advancements in Kernel Concurrency:Leveraging Machine Learning for OS Innovation.
- Explores innovative machine learning approaches to enhance kernel concurrency, focusing on test prioritization, bug detection, and adaptive synchronization mechanisms in operating systems.

Alrijjal, D., & Aldaghma, J. (2024). Securing the Internet of Things: Addressing Cross-Layer Vulnerabilities.
- Investigates IoT security challenges across layers and proposes integrated solutions to address cross-layer vulnerabilities for enhanced system trust and reliability.

Alrijjal, D., & Aldaghma, J. (2025). Evaluating Digital Twin Technology for Proactive Cybersecurity Defense.
- Systematic analysis of Digital Twin applications in cybersecurity, demonstrating potential for 97.5% detection accuracy and 1.5s latency in simulated environments through IoT-AI integration.

Projects

Virtual Art Gallery Website
- Developed a dynamic virtual art gallery website allowing users to browse, search, and view artwork collections.
- Tools Used: HTML, CSS, JavaScript, PHP

Network Design for Educational Institution
- Designed and implemented a network architecture for a multi-campus educational institution, supporting secure communication between devices.
- Tools Used: Cisco Packet Tracer, Networking Protocols

SecureTwin Cybersecurity Digital Twin (Conceptual Design)
- Designed a comprehensive cybersecurity testing platform architecture using digital twin methodology
- Created detailed system diagrams and performance simulations for 10,000-node environments

Honors and Awards

Dean's List, Effat University
- Academic Year 2023-2024, 2022-2023

Academic Merit Scholarship, Effat University — 2022-Present
- Awarded 50% scholarship based on academic performance

Technologies and Skills

Skills: Problem Solving, Presentation Skills, Time Management, Communication, Teamwork, Research, Mathematics, Statistics, Data Analysis & Visualization, System Design, Algorithm Design

Languages: C++, Python, Java, SQL, HTML, CSS, JavaScript, PHP

Software: SQL, Git, Cisco Packet Tracer, Jupyter Notebook, Scikit-learn, Pandas, NumPy, Matplotlib, TensorFlow