

# 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

**Alrijjal, 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** 2022-Present

- Honored for exceptional academic achievement and consistent excellence in coursework.

**Academic Merit Scholarship, Effat University** 2022-Present

- Awarded 50% scholarship based on academic performance

## Technologies and Skills

**Programming:** Python, C++, Java, SQL, HTML, CSS, JavaScript, PHP

**Data ML:** TensorFlow, Scikit-learn, Pandas, NumPy, Matplotlib, Jupyter Notebook

**Networking Tools:** Cisco Packet Tracer, Git, SQL

**Soft Skills:** Problem Solving, Communication, Teamwork, Time Management, Research