# Dana Alrijjal

Jeddah, KSA | alrijjaldana@gmail.com | +966 55 453 2004 | researchgate.net/profile/Dana-Alrijjal
linkedin.com/in/dana-alrijjal | github.com/daaalrijjal

## 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.

## 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. (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.

**Alrijjal, D., & AlDaghma, J. (2025). A Multi-Layered Adaptive Framework for Adversarially Robust AI in Cybersecurity Applications.**
- Analyzes adversarial machine learning threats (2022–2025) and proposes a Multi-Layered Adaptive Defense Framework combining detection, incremental retraining, and explainable auditing for cybersecurity AI.

## Projects

**Network Design for Educational Institution**
- Designed and implemented a network architecture for a multi-campus educational institution, supporting secure communication between devices.

**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

**Adversarial-Robust NLP for Cyber Threat Intelligence (CTI)**
- Fine-tuned DistilBERT for Cyber Threat Intelligence classification with FGSM adversarial training to improve robustness.
- Compared baseline and robust models using Clean Accuracy, Macro F1, Robust Accuracy, and ASR.

## 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

**AI / ML:** Python, PyTorch/TensorFlow, HuggingFace, NLP, Transformers, Adversarial ML

**Data:** Pandas, NumPy, Matplotlib

**Systems / Networking:** C++, Cisco Packet Tracer

**Web:** HTML, CSS, JavaScript, PHP

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