Dana Alrijjal

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Education

Effat University , Bachelor of Science in Computer Science — Aug 2022 – Present
- GPA: 3.97/4

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