

DEYAA ADAM

Biomedical & Clinical Engineer

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PROFESSIONAL SUMMARY

Biomedical Engineering graduate with hands-on hospital experience across clinical engineering, medical device maintenance, and healthcare systems support. Trained in medical equipment troubleshooting, calibration, and preventive maintenance through internships at Abdali Hospital and Al-Hadi Medical's maintenance workshop. IEEE-published author in surgical robotics simulation and a five-time award winner in national health-technology competitions. Specialized coursework in clinical systems engineering, medical instrumentation, device cybersecurity, and healthcare project management. Skilled in multidisciplinary collaboration, technical documentation, and applying engineering principles to real-world clinical environments.

EXPERIENCE

Biomedical Engineer Intern — Al-Hadi Medical & Information Technology, Amman Jun 2026 – Jul 2026

- Assisted technicians in diagnosing, repairing, and calibrating medical equipment within the maintenance workshop
- Performed routine inspections and functional testing on devices to verify safe and accurate operation
- Documented service records, repair logs, and equipment status reports for maintenance tracking
- Supported preventive maintenance schedules to reduce equipment downtime and extend device lifespan
- Followed workshop safety procedures and manufacturer guidelines while handling and testing equipment

Biomedical Engineer Intern — Abdali Hospital, Amman Sep 2025 – Oct 2025

- Supported clinical engineering staff in monitoring and maintaining hospital medical equipment
- Conducted routine inspections and functionality checks on medical devices, reporting abnormalities to supervising engineers
- Assisted in troubleshooting technical issues and documenting findings in service and equipment records
- Followed hospital safety and compliance procedures while performing engineering support tasks

Chief Webmaster (Volunteer) — IEEE Jordan Section, Amman Mar 2024 – Dec 2025

- Coordinated technical projects and administrative tasks across a multidisciplinary volunteer team
- Maintained accurate documentation and reporting for ongoing digital initiatives and section activities
- Managed front-end web development (HTML, CSS, JS) and provided ongoing technical support and troubleshooting

EDUCATION

B.Sc. Biomedical Engineering — The Hashemite University, Zarqa, Jordan Oct 2022 – Sep 2026

Clinical Engineering Professional, Accelerated Pathway (6-Month Program) — Al Hussein Technical University (HTU), Amman, Jordan 2024 – 2025

Specialized clinical/hospital engineering training covering clinical systems engineering, engineering problems in hospitals, medical instrumentation, human errors and medical device accidents, and medical device cybersecurity.

PROJECTS

AIN Surgical — Synthetic Data Generation for Surgical Robotics (Graduation Project)

- Developed a low-cost, high-fidelity clinical simulation framework for generating synthetic training data in surgical robotics
- Work published at the 2026 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT)

Virtual Medical Imaging Lab (V-MIL) — Imaging Systems Training Simulator

- Built an interactive virtual laboratory that simulates medical imaging modalities and equipment operation for training purposes
- Applied imaging physics and instrumentation principles to reproduce realistic acquisition workflows

Clinical Masters — CMMS Tool

- Designed a CMMS tool that helps managing biomedical equipment maintenance with real time tracking

Future Ambulance Simulator — Pre-Hospital Emergency Care Concept

- Prototyped a next-generation ambulance environment integrating connected medical devices and emergency response workflows

PUBLICATIONS

D. Adam and B. Al-Naami, "AIN Surgical: A Low-Cost Framework for Synthetic Data Generation in Surgical Robotics Using High-Fidelity Clinical Simulation," 2026 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT), IEEE, 2026, pp. 174–178. DOI: 10.1109/AEECT69724.2026.11657862

HONOURS & AWARDS

- 1st Place, Projects Competition — EMBS National Day 2025, IEEE EMBS Jordan Chapter (Nov 2025)
- 3rd Place, Future Health Impact Hackathon 2025 — King Hussein Cancer Foundation and Center (Oct 2025)
- 2nd Place, 10X Project Competition — Faculty of Medicine, The Hashemite University (Oct 2025)
- 2nd Place, Falling Walls Lab Jordan — Falling Walls Lab Foundation, Germany (Jul 2023)
- 3rd Place, Technical Path, "Health Tech Hustle" — IEEE HU EMBS Student Chapter (Mar 2023)

CERTIFICATIONS

- Clinical Engineering Professional, Clinical Systems Engineering & Clinical Engineering Fundamentals — Al Hussein Technical University (HTU)
- Engineering Problems in Hospitals & Medical Instrumentation in Hospitals — Al Hussein Technical University (HTU)
- Medical Devices Cybersecurity & Human Errors and Medical Devices Accidents — Al Hussein Technical University (HTU)
- Foundations of Healthcare Systems Engineering — The Johns Hopkins University
- Project Management: Healthcare Projects — LinkedIn Learning
- Biomedical Instrumentations Course — IEEE EMBS
- Radiation Therapy Planning with PET/CT & Radiotherapy Program — Siemens Healthineers / Star Fall Training Academy
- MRI Systems: Innovative Applications & Engineering Practice — Learnak.io
- Atellica® Solution Software & Hardware Overview, CT Dual Energy Basic & Advanced User — Siemens Healthineers
- Python and Data Analysis — SHAI for AI
- Cascading Style Sheets (CSS) & HTML — Orange Telecommunication Jordan

CORE SKILLS & QUALIFICATIONS

- **Medical Equipment Support:** troubleshooting, calibration, functional testing, and preventive maintenance
- **Clinical Systems Knowledge:** hospital medical equipment, imaging systems (CT, MRI), and instrumentation fundamentals
- **Biomedical Engineering:** medical device design & CAD/FEA, biosignal processing, medical image analysis & computer vision, embedded systems, biomechanics & motion analysis, biomaterials & tissue engineering
- **Regulatory & Quality:** ISO 13485, MDR, FDA frameworks; verification & validation (V&V) and design controls; medical device cybersecurity; human error and accident prevention
- **Documentation:** service records, equipment logs, compliance and safety reporting
- **Data & Analysis:** applied machine learning, biostatistics & experimental design (DOE), data collection and reporting
- **Project Coordination:** multidisciplinary teamwork, healthcare project management, stakeholder reporting
- **Technical Tools:** AutoCAD, SketchUp, Unity (C#/C++), Python, Microsoft Office, HTML/CSS/JavaScript

PROFESSIONAL MEMBERSHIPS

- IEEE Student Member (2023 – Present); IEEE Engineering in Medicine and Biology Society (EMBS)

LANGUAGES

- Arabic — Native | English — C1 (Advanced) | German — B2 (Upper Intermediate)