MOUATH ABU DAOUD

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EDUCATION AND CERTIFICATIONS

New York University   Aug 2021 - May 2025
BSc in Bioengineering (cum laude honors)   *GPA: 3.89*

B and H EMS Training Facility   Jan 2024 - May 2024
Emergency Medical Technician - Basic   *New York State Certified (NYE525944)*

WORK EXPERIENCES

Motix for Neuromuscular Rehabilitation   Feb 2025 - Present
Founder and Inventor   *Abu Dhabi, UAE*
- Designed and prototyped a low-cost (under $200), gamified rehabilitation console using custom sensors and machine learning to support neuromuscular recovery for stroke and injury patients.
- Led all aspects of development, from hardware design and coding to user research and iterative testing. Currently sharing progress and engineering insights at mouathbuilds.com.
  Project in development; open to collaboration and clinical validation.

Clinical AI Laboratory   Apr 2024 - Present
Research Assistant (machine learning and NLP)   *New York, USA, and Abu Dhabi, UAE*
- Built MedArabiQ, the first benchmark of its kind for the evaluation of large language models (LLMs) for Arabic healthcare applications, addressing linguistic and cultural barriers to improve clinical accessibility. The benchmark was submitted for publication at the Machine Learning for Healthcare Conference (first author). GitHub
- Currently expanding MedArabiQ to over 10,000 samples for use in analyzing and fine-tuning SOTA LLMs for accuracy and reliability in Arabic medical settings, ensuring alignment with real-world healthcare needs.

New York University Abu Dhabi   Aug 2022 - Aug 2023 and Aug 2024 - May 2025
Resident Assistant   *Abu Dhabi, UAE*
- Facilitated interdepartmental collaborations to develop events to create a cross-cultural experience for students.
- Provided robust support and mentorship to over 30 students while also acting as a resource referral in support of over 500 students.

Epilepsy and Neurology Group   Jun 2024 - Aug 2024
Medical Assistant   *New Jersey, USA*
- Assisted in neurological examinations, patient history intake, diagnostic testing, and provided support in emergencies under supervision.
- Streamlined patient care operations by managing efficient scheduling, documentation, and workflow.

New York Medical College   Nov 2023 - Jul 2024
Research Assistant   *New York, USA*
- Spearheaded multiple research projects by applying sophisticated data analysis, critical thinking, and extensive collaboration to uncover valuable health insights.
- Conducted literature review, manuscript drafting, data collection, and referencing on multiple interdisciplinary projects in collaboration with a diverse team of physicians and researchers.

Lab for Neuroengineering and Translational Medicine   Oct 2021 - May 2022 and Feb 2023 - Aug 2023
Research Assistant (translational medicine)   *Abu Dhabi, UAE*
- Worked on designing, developing, and optimizing a novel drug delivery system that aimed for oral insulin, vancomycin, and acyclovir administration.
- Developed complex computational models to simulate gastrointestinal conditions using COMSOL for drug delivery optimization.

AlQawafel Industrial and Agricultural Corporation   Jun 2022 - Sep 2022
Bioengineering R&D Intern   Zarqa, Jordan
- Fabricated and integrated novel fermentation techniques to develop an efficient acetic acid bioproduction line.
- Initiated the development of an ammonium citrate production line.

LEADERSHIP AND COMMUNITY ENGAGEMENT

MyoMetrics AI   Oct 2024 - May 2025
Team Member   *Abu Dhabi, UAE*
- Currently designing an AI-driven platform to detect Duchenne Muscular Dystrophy (DMD) using low-field MRI, enabling affordable diagnostics in low-resource settings.
- Collaborated with a multidisciplinary team to integrate biomedical imaging and machine learning for scalable diagnostic solutions.
- Runners up at the Nexus 2024 challenge in Amity University Dubai.

NYUAD Student Government Health and Wellness Committee   Aug 2022 - May 2025
First Term: Project Coordinator; Second Term: Committee Chair   *Abu Dhabi, UAE*
- Applied sophisticated statistical methods to deliver data-driven insights to guide evidence-based decision-making to contribute valuable insights to healthcare and menstrual hygiene product distribution.
- Led a cross-functional team of diverse researchers that orchestrated data collection, analysis, and interpretation of NYUAD's health center, resulting in the generation of recommendations focused on tailored gender-specific approaches, enhanced staff training, and proactive mental health services promotion.

NYUAD Bioengineering Society and Jordanian Cultural Association   Sep 2022 - May 2025
Founding Member and Operations Officer
- Spearheaded event planning and coordination efforts while playing a pivotal role in securing funding for numerous impactful events.

AlBasheer Hospital - Emergency Medicine Unit   Aug 2023
Volunteer Medical Assistant   *Amman, Jordan*
- Assisted with patient intake, patient care, advanced life support, suturing, wound closure, and trauma management.

COURSEWORK – BIOENGINEERING – NEW YORK UNIVERSITY

Undergraduate
Mathematics: Calculus and Multivariable Calculus with Applications to Science and Engineering; Linear Algebra; Differential Equations; Probability and Statistics – *Programming:* Computer Programming for Engineers; Digital Logic; Design and Innovation – *Sciences:* Foundations of Science 1 - 6; Organic Chemistry 1 and 2; Epigenetics, Physical Chemistry, Biochemistry – *Engineering:* Biotransport, Conservation Laws, Circuits, Statics, Numerical Analysis; Bioimaging, Laser and Optics – *Bioethics*

Graduate
Sciences: Anatomy, Physiology, and Biophysics 1 and 2 – *Engineering:* Biomedical Device Design and Development; Biomaterials; Computer-Aided Design; Biomechanics

PUBLICATIONS

- Mouath Abu Daoud, Chaimae Abouzahir, Leen Kharouf, Walid Al-Eisawi, Nizar Habash, and Farah E. Shamout. "MedArabiQ: Benchmarking Large Language Models on Arabic Medical Tasks." arXiv preprint https://arxiv.org/abs/2505.03427 (2025).
- Lee, Justin, Jessica Lee, Mouath Abu-Daoud, and Yazan A. Al-Ajlouni. 2024. "Assistive Communication Devices in Rett Syndrome: A Case Report and Narrative Review" *BioMed* 4, no. 2: 146-155. https://doi.org/10.3390/biomed4020012
- Tanashat, Mohammad, Ahmed Zayed, Mohammed Ayyad, Mouath Abu Daoud, Mohammad Tabbalat, Obieda Altobaishat, Jenna Nusier, F. N. U. Deepak, and Yazan A. Al-Ajlouni. "Current Status and Challenges of Cardiac Transplantation in the MENA Region: A Narrative Review." *Current Problems in Cardiology* (2024): 102920. https://doi.org/10.1016/j.cpcardiol.2024.102920

SKILLS

Computer Modeling and Hardware Design: COMSOL; Solidworks; Fusion 360; CNC; Integrated Circuit Design; Arduino – *Computer Programming:* C++; MATLAB; Python (Machine Learning using PyTorch and Tensor Flow); HTML; CSS; G-Code; Verilog; Microsoft Office – *Research and Laboratory:* Survey Design; Organic Synthesis; Experimental Design; Experimental Techniques; Wet Laboratory Skills; Hypothesis Testing; HPLC; Spectrometry; Data Analysis – *Medical:* EMT-B; Basic Life Support; Mental Health First Aid; First Aid; Patient Care; Patient Transport – *Leadership and Teamwork* – *Project Planning and Development* – *Communication* – *Time Management* – *Problem-Solving*.