MOTAZ ALQAOUD

Senior AI/ML Engineer • Healthcare Technology • Medical AI Innovation

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Senior AI/ML Engineer at Abbott, currently leading AI integration into current healthcare product lines, and Ph.D. Biomedical Engineer with a proven record spanning industry and doctoral research in medical imaging and surgical navigation. Skilled at translating advanced research into clinical impact through cross-functional collaboration with clinicians, engineers, and product teams. Pursuing an MBA to complement deep technical expertise with business strategy and leadership.

PROFESSIONAL EXPERIENCE

Abbott — Senior AI/ML Engineer — Team Lead, AI Integration *2025 – Present*

- Team lead responsible for integrating AI/ML capabilities into current healthcare product lines, directing technical execution across engineering, clinical, and product teams.
- Develop and deploy AI/ML models supporting healthcare technology and medical device applications.
- Apply deep learning and computer vision to complex medical data, improving outcome accuracy and clinical workflow efficiency.

Old Dominion University — PhD Researcher — Surgical Navigation & Medical AI *2020 – 2024*

- Developed a real-time AI-driven surgical navigation system integrating MRI, ultrasound, and deep learning — achieving 4.6 mm tumor localization accuracy for breast cancer surgery.
- Led interdisciplinary collaboration with surgeons and radiologists at Eastern Virginia Medical School to translate research into clinical workflows.
- First-authored 4 peer-reviewed publications (IEEE EMBC, ANNSIM) on breast imaging and surgical simulation.

Old Dominion University — Graduate Teaching Assistant — ECE Dept. *2020 – 2024*

- Taught and mentored 200+ engineering students across programming, signal processing, circuit analysis, and medical imaging courses. Received Best Graduate Teaching Assistant Award.

EDUCATION

- **Ph.D., Biomedical Engineering** · Old Dominion University · 2024
- **M.S., Biomedical Engineering** · University of New Haven · 2019
- **B.E., Biomedical & Systems Engineering** · Cairo University · 2014

TECHNICAL SKILLS

- **AI & ML: Deep** Learning, CNNs, GNNs, RNNs, Reinforcement Learning, Generative AI, LLM/Agentic AI, NLP, PyTorch, TensorFlow, Segmentation & Registration
- **Medical Imaging: MRI**, Ultrasound, DICOM, NIfTI, 3D Slicer, ITK/VTK, Image-Guided Surgery
- **MLOps & Cloud: DevOps**/DataOps/MLOps, Azure ML, Azure Databricks, AWS, CUDA, HPC, Docker
- **Simulation & CAD: FEA**, Abaqus, ANSYS, SolidWorks, Digital Twins, CGAL, Blender, MeshLab
- **Regulatory: FDA** Submissions, SaMD, Biocompatibility, EU MDR/IVDR, Clinical Validation

CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

- Reinforcement Learning Specialization (Univ. of Alberta & Amii) · AI for Medical Diagnosis & TensorFlow Developer Cert. (DeepLearning.AI) · DevOps/DataOps/MLOps (Duke) · Generative AI (IBM) · AI Agents on Azure AI Foundry, Azure ML & Databricks (Microsoft) · Data Engineering in AWS · Digital Twins (Univ. of Michigan) · ANSYS Simulation
- Recent events: World Agentic AI Summit (Berlin, 2026) · ANSYS Simulation World Central (Minneapolis, 2026) · RAPS MN Medical Devices Essentials (Minneapolis, 2026) · Mayo Clinic AI in Cardiology (Napa, 2026)
- Presenter — IEEE EMBC Glasgow (2022) · ANNSIM San Diego (2022), Hamilton (2023), Madrid (2025)

LEADERSHIP & ACHIEVEMENTS

- Team Lead, AI Integration — Abbott: direct technical roadmap for embedding AI/ML into current product lines; drive cross-functional alignment across engineering, clinical, and product teams
- Best Graduate Teaching Assistant Award — ECE Department, Old Dominion University (2023–2024)
- Best Paper (Medical Track) & Best Overall Paper — Modeling & Simulation Capstone Conference (2022, 2023)
- Reviewer — Clinical Breast Cancer Journal (Elsevier); IEEE Member (2021–2024)