

MOTAZ ALQAUD

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

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, Transformers, Random Forests, XGBoost, SVM, Reinforcement Learning, Generative AI, LLM/Agentic AI, MCP, RAG, LangChain, Vector Databases, Prompt Engineering, NLP, PyTorch, TensorFlow, Segmentation & Registration

Medical Imaging: MRI, Ultrasound, DICOM, Nifti, MONAI, 3D Slicer, ITK/VTK, Radiomics, Image-Guided Surgery

MLOps, Cloud & Infra: DevOps/DataOps/MLOps, Azure ML SDK, Azure Databricks, AWS, AWS SageMaker, GCP Vertex AI, Docker, Kubernetes, Terraform (IaC), CI/CD, MLflow, CUDA, HPC, microservices architecture

Data & Privacy: SQL/NoSQL, data modeling, synthetic data generation, federated learning, data anonymization

Simulation & CAD: FEA, Abaqus, ANSYS, Digital Twins, CGAL, Blender, MeshLab

Regulatory: FDA Submissions, SaMD, 510(k), Biocompatibility, EU MDR/IVDR, HIPAA, GDPR, 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: Ai4 2026 (Las Vegas, Aug 2026) • World Agentic AI Summit (Berlin, Feb 2026) • ANSYS Simulation World Central (Minneapolis, May 2026) • RAPS MN Medical Devices Essentials (Minneapolis, Jun 2026) • Mayo Clinic AI in Cardiology (Napa, Oct 2025)
- 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).