Dhiyaa Al Jorf

DoodyShark | doodyshark.github.io | +971-56-502-4325 | linkedin.com/in/dhiyaa-al-jorf | dhiyaa.jorf@gmail.com

Education

Eidgenössische Technische Hochschule (ETH) Zürich, Switzerland Sep. 2025 – Present

Masters of Science in Computer Science

- Machine Intelligence Major; Theoretical Computer Science Minor

New York University Abu Dhabi (NYUAD), Abu Dhabi, UAE Aug. 2021 – May 2025

Bachelor of Science in Computer Engineering, ***summa cum laude*** *GPA: 4.0/4.0*

- Studies included two semesters abroad in New York, a short-term stay at NYU Paris, & a seminar in Greece

Publications

F. Darwish*, **D. Al Jorf***, E. Tyacke, C. Armanini, F. E. Shamout, & S. F. Atashzar, "Leveraging Agonistic-Antagonistic Coactivation in Single-Grid HDsEMG for Hand Gesture Recognition." Under review

S. Elsharief, L. J. Lechuga Lopez, F. Darwish, **D. Al Jorf**, M. A. Andargei, A. Subanya, C. Ma, F. E. Shamout, "MedCAM: Multimodal Clinically-Aware Adaptation Module for Chest X-ray Foundation Models." Under review

L. J. Lechuga Lopez, S. Elsharief, **D. Al Jorf**, F. Darwish, C. Ma, F. E. Shamout, "Uncertainty Quantification for Machine Learning in Healthcare: A Survey." Accepted by *AHLI CHIL 2025*

D. Al Jorf*, F. Darwish*, C. Armanini, "Enhancing the Efficiency of Hand Gesture Classification by Harnessing Muscle Synergies." One page abstract accepted by *IEEE EMBC 2025*

* These authors are co-first authors

Recent Experience

Oxford Centre for Artificial Intelligence May 2025 – Present

Tutor *Oxford, UK - (Remote / Dubai, UAE)*

Assist in designing and delivering technical and non-technical AI courses in collaboration with government entities.

- Co-developing curriculum for the **Kellogg Korean Government Officials AI Programme** at *Kellogg College, University of Oxford.*
- Created interactive course materials for the **Chief Artificial Intelligence Officers Program 2025** in Dubai with the **UAE AI Office**.
- Designed and delivered in-person sessions and mentored interdisciplinary **capstone projects** during the **Artificial Intelligence Program 2025** in collaboration with the **UAE AI Office** at the *University of Birmingham, Dubai.*

Clinical AI | *NYUAD* Aug. 2024 – July 2025

Research Assistant — Post-Graduation Practical Training Program *Abu Dhabi, UAE*

Funded by the **Center for Artificial Intelligence and Robotics (CAIR)**.

- Demonstrated the utility of Magnitude Square Coherence to analyze intramuscular synergies within EMG data.
- Reviewed a full paper submission for *IEEE EMBC 2025.*
- Benchmarked **Medical Vision Language Models (VLMs)** for Chest X-Ray tasks using standard benchmarking toolkits & extending on them to integrate *multi-GPU support.*
- Extracted 70 papers using *Covidence* and compiled review findings with a PhD student to compile review findings into a paper.
- Facilitated & led weekly **reading groups** on SOTA research and moderated **roundtable discussions** with clinicians and AI experts during the *Clinical AI Bootcamp.*
- Extracted 20 papers to co-author a research proposal, identifying major gaps in **Uncertainty Quantification (UQ) for multimodal & cost-sensitive feature acquisition for BC diagnosis.**

Medical Robotics and Interactive Intelligent Technologies Lab | *NYU* Feb. 2024 – Aug. 2024

Research Assistant *New York, USA*

Funded by the **CAIR**.

- **Achieved SOTA performance** (90% accuracy) while reducing both model size and data requirements by **50%**.
- Conducted iterative experiments on **HPC clusters** with novel architectures and *XAI* tools.
- Reviewed and extracted around 20 papers to co-author a proposal identifying **agonist–antagonist coactivation** as a redundancy source for electrode reduction in *sEMG-based gesture recognition.*

Awards & Honors

Summa Cum Laude | *Top 5% of Engineering Students in NYUAD Class of 2025* May. 2025

Founders Day Award | *Top 40% of NYUAD graduating students* May. 2025

2nd in Mubadala's Higher Education Student Competition | *Autonomous Track* Apr. 2025

Won 2nd in the Autonomous Track for our synthetic data generation, training, and simulation pipeline.

eBrain Lab LLM Fine-Tuning Competition | *First Place* Sep. 2024

1st place team in the LLM Fine-tuning competition scored on model size & performance on a medical MCQA task.

IEEEXtreme 16.0 & 17.0 Competitions | *Top 10% in the Middle East* Oct. 2022 & Oct. 2023

4th & 3rd place teams in the UAE in 2022 & 2023 respectively

Dr. Gil Moore Award for Innovation | *Spaceport America Cup 2023* Jun. 2023

2nd/158, Runners-Up Award for the innovative design of the Haloship's parachute deployment mechanism.

Engineering Design & Innovation

Team Triton | *2024–2025 Mubadala Higher Education Student Competition* Sep. 2024 – Apr. 2025

Participating in a university competition to design & develop an **automated floating ocean trash-collecting robot**.

- Conducted **in-pool testing** & data collection to evaluate system performance.
- Created a **synthetic dataset** for trash detection tasks using *BlenderProc*.
- Trained *YOLO11* & *YOLOv12*-based models, achieving **90% detection accuracy**.

Intuitive & Reliable Prosthetic Control System | *Capstone Project* Aug. 2024 – May 2025

Self-proposed capstone project to design a **prosthetic control system** within a **VR environment**.

- Reviewed & extracted **30 papers** to identify gaps in the reliability & intuitiveness of prosthetic control strategies.
- Designed, implemented, & tested multiple **vision-based pipelines** for **3D object reconstruction** and *Gesture Pose Detection*, leveraging pretrained models.
- Developed the **VR simulation environment** in *Unity* and integrated it with ML models through *Unity Sentis* & *UDP connections* with Python processes.

Hold Down Release Mechanism | *NASA Jet Propulsion Lab (JPL)* Aug. 2022 – Jun. 2023

nyuad.space Team Member *Los Angeles, USA*

Design project in collaboration with **NASA JPL mentors at Caltech** as part of the *JPL University Crowdsourcing Initiative (JUCI)*.

- **Reduced system cost** from $10,000 to $1,000 while remaining compliant with **NASA** flight readiness metrics.
- Finalized GD&T-compliant **technical drawings** according to manufacturing method.
- **Presented design** to engineers at *Caltech JPL* in Los Angeles, California.

Haloship | *Spaceport America Cup 2023* Aug. 2022 – Jun. 2023

nyuad.space Team Member *New Mexico, USA*

Rocket comprised entirely of mechanical sub-assemblies (suitcase-packable) with custom avionics including a flight computer & high-speed data acquisition payload.

- Designed & developed the rocket's **mechanical subassemblies**.
- Performed **flight simulations** & *FEM* simulations.
- **Successfully launched & recovered** the rocket at the *Spaceport America Cup 2023* in Las Cruces, New Mexico.

Community Service & Involvement

Precalculus Teacher Assistant | *Afghanistan Female Student Outreach (AFSO)* Jan. 2025 – Apr. 2025

Taught weekly recitation sessions and grading exams for a 14-week precalculus course.

Object-Oriented Programming (OOP) Teacher Assistant | *NYUAD* Jan. 2025 – Mar. 2025

Teacher assistant for 7-week OOP course with 15 students. Co-led weekly lab sessions and graded assignments.

Differential Calculus Teacher Assistant | *AFSO* Sep. 2024 – Dec. 2024

Taught weekly recitation sessions and graded exams for a 14-week differential calculus course.

Climbing Wall Supervisor Assistant | *NYUAD Athletics* Aug. 2022 - Jun. 2023

Assisted in supervising sessions 2–4 hrs times a week, organizing events, & weekly equipment maintenance.

Habitat For Humanity, Bayt Eidis, Jordan | *Volunteer* Mar. 2023

Volunteered in Jordan to help construct a community center for underprivileged families.