Ahmad AliAhmad

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EDUCATION

Brown University, 2024–2028   Providence, United States

Concentrating in Engineering Physics.

Courses Taken: Deep Learning for Scientists & Engineers, Engineering Statics and Dynamics, Applied Linear Algebra, Applied Ordinary Differential Equations, Computer Science: An Integrated Introduction, Multivariable Calculus (Physics/Engineering)

PERSONAL PROJECTS

AI & Robotics Development   2017–2025

- Built a self-driving car integrating Python-based AI with Arduino hardware to demonstrate autonomous navigation.
- Implemented and released an open-source AI modeling library in C, adopted by 50+ developers worldwide.
- Designed and deployed a drone system for a 15772 square meter solar panel field, currently in use at King's Academy in Jordan.

Predictive Modeling of Charged Particle Dynamics using Physics-Based Neural Networks   2024–2025

- Compared and applied Symplectic Networks (SympNets), Physics Neural Networks (PNNs), and Physics-Informed Neural Networks (PINNs) to model charged particle trajectories in electromagnetic fields with high accuracy.

WORK EXPERIENCE

CERN, 2025   Geneva, Switzerland

- Developed and proposed a calibration technique for Higgs boson decay simulations in electron–positron collisions using Graph Neural Networks and Transformers (PyTorch; 500k+ parameters).
- Collaborated with Brown, MIT, and CERN professors to characterize forward–backward asymmetry in FCC-ee, informing detector design optimizations with 1mrad precision.

Kyron Medical, 2025   Geneva, Switzerland

- Led the design and development of an ML-powered pipeline leveraging large language models (LLMs) to automate and streamline denied claim appeals, trained on over $4.5M in denied claims data.

Ramallah Municipality, 2024   Ramallah, Palestine

- Engineered and implemented system solutions—managing server maintenance, automating check-in workflows, and delivering helpdesk support—to streamline operations and reduce downtime, increasing efficiency by 40%.

Global Tech, 2023   Ramallah, Palestine

- Transformed and deployed server infrastructure solutions, enhancing scalability, performance, and maintainability while reducing costs by 30%.

LEADERSHIP EXPERIENCE

WorkFrame Consulting Firm, 2022–2024

- Founded and led a consulting firm offering financial, construction, and international strategy support to small businesses, achieving a 45% cost reduction through importation and operational advice.
- Advised a farm startup in scaling operations to a monthly output of 100 sheep through targeted business consulting.

Lingouistic, 2022–2024

- Developed gamified educational platforms—including websites and mobile apps—to enhance language learning engagement and retention, piloted by 4+ schools in Jordan.
- Presented the startup in pitch competitions and secured partnerships with educational institutions across Jordan.

Mushrooming Foundation, 2022–2024

- Founded a nonprofit initiative to expand access to programming education across Jordan.
- Led the organization of national hackathons and authored programming curricula adopted by 10+ partnering schools.

TEDx Talk, 2024   Jordan

- Delivered a TEDx talk with 500 attendees and 1000+ online views titled "Beyond the Weld: Unraveling Society's Hidden Fusions," exploring how industrialization and automation cause society to undervalue human effort.

SKILLS

Languages: Arabic (Native), English (Native), Korean (Intermediate), Italian (Intermediate)

AI/ML: PyTorch, SympNet, PINN, Reinforcement Learning, DDQNs, Machine Vision, LLMs

AWARDS & HONORS

Robotics Engineering Excellence (2024), First Place – Samsung Innovation Coding and Icode Edu (2024)