Mahmoud Ibrahim AbuAwd

AI & ML Engineer | Amman, Jordan

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Summary

AWS Certified AI Practitioner & Machine Learning Engineer with over 2 years of hands-on experience in deep learning, covering computer vision, natural language processing, and generative AI. Proficient in Python, TensorFlow, and PyTorch, with a solid foundation in building and deploying end-to-end machine learning solutions. Experienced in working with synthetic data, model training, evaluation, and cloud-based deployment using AWS. Also skilled in embedded systems and hardware integration with Arduino. Actively seeking a Junior AI/ML Engineer role to contribute to impactful AI-driven innovations and continue developing technical expertise.

Education

Al-Balqa' Applied University — *Bachelor of AI and Robotics (2021-2025)* — GPA: 3.34 – *Very Good* — Jordan, Salt

Experience

Intern at Future Advance Internet Solutions — Oct 2024 – Feb 2025

- Completed hands-on training at the FAIS in Artificial Intelligence, Deep Learning, and Data Preprocessing techniques. Gained practical experience in data cleaning, transformation, and preparation for machine learning models. Able to apply these skills to build intelligent systems that improve decision-making, automate processes, and drive business outcomes such as increased efficiency, customer satisfaction, and sales growth.

Intern at Innovation, Creativity, and Entrepreneurship Center — July 2024

- Collaborated in a team-driven environment with professionals. Gained practical experience in 3D design using Fusion 360, Arduino programming, and robot assembly. Contributed to solving technical challenges effectively.

Skills

Programming & Scripting: Python (TensorFlow, PyTorch, scikit-learn, NumPy, pandas, OpenCV, NLTK), C++ (Arduino).
Machine Learning & Deep Learning: CNN, RNN, Computer Vision (OpenCV), NLP (NLTK), Model Evaluation (ROC-AUC, F1 Score).
Data Handling & Engineering: Data Preprocessing, Feature Engineering, Data Augmentation, Visualization (Matplotlib, Seaborn).
Embedded Systems: Arduino (UNO, Nano, Mega), Circuit Design, 3D Design (Fusion 360, Tinkercad), Robotics & IoT.
Data Analysis & Visualization : Power BI, Microsoft Excel, pandas, Matplotlib, Seaborn.
AI Integration & Deployment : Streamlet , Flask, FastAPI.
Generative AI: LangChain, GANs, Transformers (ViT, BERT, GPT), Prompt Engineering, RAG-based Applications.
Cloud Platforms: AWS Cloud (Certified), Cloud Storage & Compute, Microsoft Azure ML Studio.
Version Control: GitHub, Notion, Microsoft Excel.
Soft Skills: Effective Communication, Team Collaboration, Working Under Pressure
Language: Arabic(Native) , English (B2 Level).

Top Projects

- **MedGAN-SynTumorClassifier: A GAN-based System for Tumor Type Prediction and Synthetic Data Generation from Medical Imaging With deployment on Website – (GitHub)**

  For my graduation project, I developed a deep learning system that uses 12 GAN models to synthetically generate brain tumor images across three classes (Meningioma, Glioma, Pituitary) to overcome limited data. I also

implemented a Vision Transformer (ViT) to classify tumor versus non-tumor images. The system is deployed on a Flask website with an HTML/CSS interface, offering an end-to-end solution for improved diagnostic support through realistic image generation and accurate classification.

FluentWave: Web-Based Speech Transcriber - (Github)

Speech-to-Text system using Word2Vec for semantic accuracy, deployed via Flask on a web interface for real-time audio-to-text conversion.

Price-Pilot Agent: End-to-End AI for SMB Retailers - (Github)

Price-Pilot Agent is an end-to-end, multi-agent AI platform designed to help small and mid-sized retailers sell smarter, restock automatically, and deliver reliably—all through a single conversational interface.

Anomaly Detection in Network Traffic Using Isolation Forest and Deep Learning - (Github)

Anomaly detection in network traffic using Isolation Forest and Deep Learning for real-time identification of intrusions and malicious activities.

PhishGuard: ML-Based Website Threat Detection - (Github)

Phishing website detection using Logistic Regression, KNN, and SVC, with SVC emerging as the most effective model due to kernel-based non-linear pattern recognition.

Certifications and Courses

AWS Certified AI Practitioner **— AWS (May 2025)**
Deeplearning.ai Deep learning Specialization **— DeepLearning.AI (Sept 2024)**
DeepLearning.AI TensorFlow Developer Specialization **— DeepLearning.AI (Jan 2025)**
Data science & Machine learning using Python — **the hope international (March 2024)**
Preparing Data for Analysis with Microsoft Excel — **Microsoft (March 2025)**
Harnessing the Power of Data with Power BI — **Microsoft (March 2025)**
Embedded Systems — **INJO (MAY 2024)**

Research Paper

"The Role of Artificial Intelligence in Improving the Criminal Justice System to Reduce Arbitrary Detention"

The research explores AI's potential to enhance fairness and transparency in the justice system by identifying wrongful detention patterns and mitigating biases, providing a theoretical framework to reduce arbitrary detention and promote accountability.

"MEDGAN: Advanced Medical Image Generation"

Introduces a GAN-based method to create high-quality synthetic brain MRI tumor images, boosting limited medical datasets and improving segmentation model performance.

Volunteering

IEEE – (MAY 2024 – JAN 2025):

I volunteer with IEEE at my college, joining workshops and events that foster innovation and collaboration among students. This experience has enhanced my teamwork abilities and allowed me to network with professionals and fellow students in the field.

Google Developer Group BAU – (OCT 2024 - Present):

I volunteer with GDG at Balqa Applied University as a graphic designer, contributing to event promotions and community activities. This role allows me to support tech enthusiasts while enhancing my creative and design skills.