

Ahmad Debow

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🛂 Passport No: n016639391 🗓 DOB: Oct 20, 1998 📍 POB: Tartous, Syria 🇸🇾 Nationality: Syrian

About Me

I am passionate about using technology to solve real-world problems, with expertise in AI, cloud computing, and development. I enjoy engaging in leadership roles, volunteering, and sports, while also conducting research in AI and data science.

Education

BSc Information Systems Engineering – Operating Systems and Networks Oct 2016 – Sep 2022
[Higher Institute for Applied Sciences and Technology \(HIASST\)](#) [🔗](#), Damascus, Syria
Final Grade: 75.65% (**Ranked 1st**)

Thesis: *Deep Learning for Launching and Thwarting Attacks on AI-based Intrusion Detection Systems (IDS)* [Link](#) [🔗](#).

- Developed a novel framework using **Generative Adversarial Networks (GANs)** to create **polymorphic poisoning attacks** targeting ML-based IDSs.
- Integrated **SHAP (SHapley Additive exPlanations)** to identify the most influential features, enhancing both **attack precision** and **model explainability**.
- Investigated defense mechanisms by simulating adversarial scenarios to evaluate IDS resilience and improve detection robustness.
- Designed and implemented a user-friendly, web-based **administration dashboard** to monitor IDS activity, launch attack simulations, and visualize performance metrics in real time.

Work Experience

Lead DevOps & MLOps (Machine Learning Operations) Engineer, [Maly Tech Ltd](#) [🔗](#) Dubai, UAE
Oct 2023 – Present

- Led the deployment of AI-powered fintech applications using a microservices architecture on **Amazon Web Services (AWS)** and **Google Cloud Platform (GCP)**.
- Designed and maintained scalable infrastructure using **Docker**, **Elastic Container Service (ECS)**, **Compute Engine**, and secure virtual private networks.
- Built and maintained **Continuous Integration / Continuous Deployment (CI/CD)** pipelines with **GitLab**, enabling automated testing, deployment, and monitoring workflows.
- Administered **Identity and Access Management (IAM)** roles, managed secrets, and conducted **penetration testing** to ensure robust cloud security and regulatory compliance.
- Managed data pipelines and warehousing using **AWS Glue**, **MongoDB Atlas**, and **PostgreSQL**, supporting real-time reporting and analytics.
- Implemented full-stack **MLOps** workflows for deploying, and monitoring ML models, ensuring version control and reproducibility.
- Acted as a technical liaison, communicating directly with partners such as **MTN MoMo** and **Deloitte** for system integration, delivery, and support.

Information Systems Engineer, [Higher Institute for Applied Sciences and Technology \(HIASST\)](#) [🔗](#) Damascus, Syria
Oct 2022 – Feb 2024

- Delivered undergraduate lectures and tutorials in **Operating Systems**, **Network Routing**, and **Network Security**.
- Designed course materials, assignments, and lab exercises.
- Supervised and evaluated multiple undergraduate graduation projects.
- Contributed to ongoing research and tool development in the **Programming Development Lab**.

Data Engineer, Nextinuous

- Developed and maintained scalable data pipelines using the **ELK Stack** (Elasticsearch, Logstash, Kibana) and **Apache NiFi** for real-time data integration.
- Dockerized services and supported CI/CD pipelines to optimize deployment workflows and platform reliability.

California, USA
Aug 2023 – Jan 2024

Backend Developer, DIB GmbH [🔗](#)

- Engineered and deployed **Voice over IP (VoIP)** communication systems using **Asterisk**, improving call routing and reliability.
- Managed relational databases with **MariaDB**, ensuring data integrity and performance optimization.
- Containerized services with **Docker** to streamline development, testing, and deployment across environments.

Germany
Oct 2022 – Jul 2023

Assistant Lecturer, Arab International University (AIU) [🔗](#)

- Delivered hands-on lab sessions for **Operating Systems** and **Linux**, focusing on kernel management and shell scripting.

Damascus, Syria
Jul 2023 – Sep 2023

Assistant Supervisor, Al-Sham Private University (ASPU) [🔗](#)

- Supervised a graduation project that integrated **cybersecurity** techniques with **machine learning** algorithms for intelligent threat detection.

Damascus, Syria
Jan 2023 – Mar 2023

Publications

COVID-19 Diagnosis with Deep Learning: Adjacent-pooling CTScan-COVID-19 Classifier Based on ResNet and CBAM.

Sep 2023

A. Deeb, **A. Debow**, S. Mansour, V. Shkodyrev, *Biomedical Signal Processing and Control*, Vol. 86, 105285, [10.1016/j.bspc.2023.105285](#) [🔗](#)

This study evaluated ResNet and CBAM for COVID-19 detection in CT scans, and introduced a novel architecture—AdjCNet—focusing on grayscale variations in adjacent regions to enhance classification performance.

Predicting and Forecasting Water Quality Using Deep Learning.

Mar 2023

A. Debow, S. Shweikani, K. Aljoumaa, *International Journal of Sustainable Agricultural Management and Informatics*, 9(2), pp.114–135, [10.1504/IJSAMI.2023.129858](#) [🔗](#)

Developed a four-stacked LSTM model to forecast Water Quality Index (WQI). Employed preprocessing techniques like K-NN interpolation and annual mean smoothing, along with feature selection strategies for reliable predictions.

Projects

Contradiction Detection in English using Large Language Models (LLM)

Jun 2025 – Present

Designed a FastAPI-based pipeline to detect contradictions in English text using chunking, coreference resolution, and Retrieval-Augmented Generation (RAG). Integrated OpenAI LLMs and vector similarity search for real-world applications in requirement engineering and document verification.

AI-Powered Sign Language & Assistive Technology

Feb 2025 – Jun 2025

Developed a vision-NLP hybrid system for real-time sign language recognition and auditory-to-text conversion. Aimed at bridging communication gaps for hearing and visually impaired users through LSTM models, MediaPipe hand tracking, and OpenCV-based gesture capture.

Smart Recipe Recommendation System

Dec 2024 – Feb 2025

Built a full-stack Django web app that recommends health-appropriate recipes based on user-inputted ingredients. Leveraged NLP to parse dietary restrictions (e.g., diabetes, hypertension) and recommend meals aligned with medical and lifestyle needs.

Explainable Movie Recommendations using Reinforcement Learning

Jun 2024 – Nov 2024

Explored reinforcement learning for explainable recommender systems. Used Q-Learning with biclustering and multiple similarity metrics (Jaccard, Dice, MaxInc) to improve cold-start accuracy and transparency in user-item interactions.

On-Prem Hosting & CI/CD Infrastructure

Jul 2024 – Aug 2024

Configured and deployed a Linux-based self-hosted GitLab and Jenkins CI/CD platform with static IPs and DNS setup. Automated builds, tests, and deployments for multi-repo backend/frontend systems with robust access control.

Federated Learning for Anomaly Detection

Jun 2023 – Aug 2023

Built a distributed intrusion detection system using a master-slave federated learning model. Focused on privacy-preserving aggregation of deep anomaly detectors across devices, deployed at HIAST as part of national research.

TOR Network Detection via ML

Jan 2023 – Mar 2023

Collected custom TOR network traffic datasets and built machine learning classifiers to identify encrypted flows. Conducted feature engineering and evaluated models against standard and newly curated datasets at ASPU.

Technical Skills

• Cloud Platforms & Infrastructure

AWS (EC2, ECS, RDS, Security Hub), Google Cloud Platform (Cloud Run, Compute Engine), Linux server administration, DNS, routing, gateways, load balancing, Docker, microservices architecture.

• DevOps & Automation

CI/CD pipelines with GitLab, Jenkins, Docker; Python and Bash scripting for automation, configuration management, stress testing, and system orchestration.

• Monitoring & Observability

Logging, alerting, tracing using ELK Stack and cloud-native monitoring tools; Quality of Service (QoS) management.

• Networking & Security

UNIX/Linux administration, network troubleshooting, VoIP protocols (SIP, RTP), traffic analysis, firewall management, security best practices, Asterisk PBX, audio/video codecs, and real-time communication systems.

• Data Engineering & Science

Data architecture, ETL pipelines (Apache NiFi, AWS Glue), data cleaning, feature selection, recommendation systems, and scalable backend services.

• Artificial Intelligence & Machine Learning

Deep learning (CNNs, LSTMs, GANs, DNNs), traditional ML, Large Language Models (LLMs); frameworks: TensorFlow, PyTorch, Keras, Scikit-learn. Focused on AI model development and deployment.

• Programming & Tools

Python (NumPy, Pandas, Scikit-learn), C, C++, C#, SQL (PostgreSQL, MariaDB), Java, JavaScript, Django, Git, Bash.

Languages

• **Arabic:** Native proficiency.

• **English:** IELTS certified – Reading: C1, Writing: B2, Listening: B2, Speaking: B2.

• **French:** Conversant with basic reading, writing, and speaking skills.

Volunteering & Clubs

Peer Reviewer — Biomedical Signal Processing and Control, Elsevier.	Jun 2025 – Present
Founder & Chief — AI and Python Club, HIAST, Damascus. Organized workshops and learning sessions on AI and Python.	Jan 2022 – Jun 2022
Founder, Chief & Judge — Chess Club, HIAST, Damascus. Established club, coordinated tournaments, officiated competitions.	Oct 2020 – Jun 2022
Red Crescent Volunteer (COVID-19 Response) — Tartous, Syria.	Mar 2020 – Jun 2020

References

Mr.Tawfik Haroun, Chief Technology Officer, Maly Tech Ltd ,Dubai, UAE.
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