

Abdullah Ahmed Alzahrani

AI/ML Engineer

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Summary

Machine Learning focused EE graduate with experience in **data science, computer vision, NLP**, and **cloud ML tools**. Recognized for technical skills and innovative solutions in predictive modelling and computer vision.

Education

BSc. in EE (Focus Area: Artificial Intelligence & Machine Learning) 08/2020 – 12/2024
Rensselaer Polytechnic Institute (RPI) Relevant Coursework: ML · DL · RL · Probabilistic Graphical Models · Distributed Optimization · Data Structures · FOCS

Experience

Machine Learning Lead – Sponsored Capstone Project 08/2024 – 12/2024 | Troy, New York, USA
Rensselaer Polytechnic Institute | Sponsored by VEIC & NYSERDA
Developed a data-driven approach to meet a new NYS mandate for detecting >20% VRF system leaks without resorting to invasive sensors due to engineering constraints.

- Applied **EDA, PCA** to distill 200+ parameters for **real-time inference**, designed **NN (91.15% accuracy)**
- Delivered **demo application** for **monitoring** and **preventive maintenance**, meeting client requirements
- Ran **correlation analysis** on secondary dataset to **simulate leak scenarios** for training and validation
- Collaborated with engineers, **presented findings to stakeholders**, awarded **“Outstanding Technical Progress”**

Skills

Programming Languages Python · C++ · SQL · Git	Cloud & Deployment AWS · HuggingFace · Docker · FastAPI · OpenAI API
ML & Data Science PyTorch · NumPy · Scikit-learn · TensorFlow · OpenCV · Pandas · EDA · Tableau Cloud	Soft Skills Problem Solving · Collaboration · Effective Communication · Attention to Detail

Projects

Gharsa | OpenCV · SAM · fine-tuned CLIP · Zero-Shot · AWS 05/2025 – Present
Showcased @ The Garage, Riyadh during Tuwaiq's Career Fair
Developed a site that enables novice plant owners to **identify plants, soil type, and detect plant diseases**. Built an **end-to-end computer vision pipeline** using **OpenCV, Meta's SAM**, and fine-tuned **CLIP** to localize diseases

Quantum-Inspired ML | Quantum Computing · Qiskit · Physics 05/2024 – 08/2024
Intro to Quantum Computing Final Project
Bridged **physics with classical ML**, reproducing **Google's** low-rank approximation **paper with 98% MNIST accuracy**
Optimized **parameterized quantum circuits** on **RPI's IBM Quantum System One**

Bootcamps & Certificates

AI Bootcamp - 250 hrs Tuwaiq Academy (May 2025)	Databases and SQL for Data Science with Python - 18 hrs IBM (Sep 2024)	Machine Learning Specialization - 80 hrs Stanford/DeepLearning.AI (May 2024)
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