Abdullah Ahmed Alzahrani

AI/ML Engineer

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Summary

Machine Learning focused EE graduate with experience building and deploying solutions in **predictive modeling**, **computer vision**, **NLP**, and **cloud-based ML platforms**. Skilled in turning complex data into ML solutions.

Education

Bootcamp: Building and Developing AI Models   03/2025 – 05/2025 | Riyadh, SA
Tuwaiq Academy
Completed an intensive AI bootcamp on Machine Learning with projects in Computer Vision, NLP, and cloud ML tools

BSc. in EE (Focus Area: Artificial Intelligence & Machine Learning)   08/2020 – 12/2024 | Troy, NY, USA
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, NY, 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** and delivered an **ML-based demo app** achieving **91.15% accuracy** for leak monitoring
- Simulated leak scenarios via **correlation analysis** on secondary datasets for **training and validation**
- Collaborated with engineers, **presented findings to stakeholders**, awarded **"Outstanding Technical Progress"**

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**

Skills

Languages & Tools
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

Certificates

Databases and SQL for Data Science - 18 hrs
IBM (Sep 2024)

Machine Learning Specialization - 80 hrs
Stanford/DeepLearning.AI (May 2024)