

Mohamed AlKharraz

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PROFESSIONAL PROFILE

Dedicated Automation and Software Engineer with expertise in oil and gas, production optimization systems, Data Analytics, AI, ML, SCADA systems, OT, IR 4.0, and IoT. Experience of working in Bahrain & Saudi Arabia. Strong ability to collaborate and work in a team environment on multi-disciplinary projects. Eager to contribute my technical and interpersonal expertise, in problem solving and delivering impactful results.

EXPERIENCE



Weatherford

Professional Services Engineer | October 2022 - Present

- Deployment support engineer at Bapco Upstream, providing technical support, resolving issues, and maintaining systems to ensure seamless operations.
- Appointed as Bahrain Ethics Ambassador, reinforcing Code of Business Conduct, ethics, and compliance.
- Upgraded the legacy wells SCADA system for the entire Bahrain Oil field - LOWIS to ForeSite, transitioning from outdated infrastructure to a cutting-edge Industry 4.0-enabled SCADA platform.
- Deployed Automated Well Test module for control and monitoring, incorporating business integration with Bapco Upstream applications and warehouse databases.
- Broad knowledge of Artificial Lift Systems - Rod Lift, Gas Lift, Natural Flow, ESP, Plunger Lift, PCP.
- Engineering in-house automation solutions, reducing reliance on external vendors to cut costs.
- Working with customers to develop new technology to improve system productivity.
- Facilitating alignment between product managers, designers, QA teams, and stakeholders to ensure product developments meet business requirements.
- Experience in designing, developing, architecting, implementing, and supporting end-to-end systems.



Bapco Upstream

Service Engineer | October 2022 - Present

- Providing daily operational support for ForeSite, CygNet, PI Systems, LOWIS, including proactive monitoring, troubleshooting, user assistance, and implementing system upgrades and enhancements.
- Configuring, maintaining and troubleshooting hardware including: IoT controllers, WellPilot, LufkinSAM, ForeSite Edge.
- Develop, analyze, and manage business and operational reports using BI dashboards and scripting.
- Manage data in OT/IT environments ensuring unidirectional information exchange through data diode.
- Collaborating with cross-disciplinary teams to successfully integrate various reports, synchronize information across integrated systems, improving data accuracy and integrity.
- Ensured data accuracy through rigorous quality checks and established governance frameworks to standardize data across the organization.



Tatweer Petroleum

AI Engineer & Data Science Intern | September 2021 - August 2022

- Developed machine learning models to forecast oil production using sensory data.
- Created business intelligence dashboards, visualizations, and reports to provide actionable insight.
- Increased operations productivity by building workflows to monitor equipment downtime.



Gulf Equipment And Technology

Intern | June 2021 - August 2021

- Worked on compressed air systems design, gas generation, piping, AIRnet pipes, Atlas Copco Optimizers, desiccant dryers, and ventilation design.

EDUCATION



University of Bahrain

B.Sc. in Mechanical Engineering | September 2017 - August 2021

- Graduated with excellence (GPA: 3.5 / 4.0).

Al-Muharraq Secondary School

Physics and Mathematics Secondary School Certificate | September 2014 - June 2017

- Graduated with excellence.

CERTIFICATES



The Complete SQL Bootcamp: Go from Zero to Hero | Udemy | August 2023



Alarm Management (ISA-18.2 / IEC 62682) | Exida | July 2023



AWS Certified Machine Learning Specialty | AWS | April 2022



IBM AI Engineering Professional Certificate | IBM | January 2022



Machine Learning | Stanford Online | July 2021



Engineering Project Management Specialization | Rice University | August 2020



The Finite Element Method for Problems in Physics | Michigan Univ. | March 2020



MEDIC First Aid | Bapco | 2018



Basics of Arduino | YC2030 | 2014

PROJECTS

Deploy Automated Well Test Module of Control and Monitoring for Bapco Upstream | 2024

- Developed custom logics, Created HMI screens, and data processing, for all Bahrain new production facilities.
- Worked with PLC, DNOC, OPC, SCADA.

Upgrade Legacy Well SCADA System for Whole Bahrain Oil Field with IR 4.0 capabilities | 2023

- Integrated the new SCADA system with existing infrastructure.
- Segmented the IT and OT network - with data diode, complying with latest cyber security techniques.

Develop and Implement System Availability Reporting & Workflow Optimization | 2022

- Led end-to-end development, from data entry GUI to creating Power BI dashboards and summary reports.
- Leveraged data analysis to swiftly identify and resolve availability issues.

PROFESSIONAL SKILLS

- **Programming:** Python | C | C++ | SQL | VBA | Linux | PowerShell | HTML | Workflow Automation.
- **Software:** OSI PI | ForeSite | CygNet | LOWIS | PAS | AWS | Power BI | SQL SSRS | Spotfire | Grafana.
- **Analytical:** Data Analysis Modelling | Data Integration | Computational fluid dynamics | Optimization.
- **Language:** English (Fluent) | Arabic (Native) | French (Intermediate) | Spanish (Intermediate).

AWARDS

- **Kanoo Engineering Excellence Award 2021**

Memberships

- **Society of Petroleum Engineers**
- **International Society of Automation (ISA)**

REFERENCES

- **Ali Sharaf** | Associate Director - Data Science at Tamkeen. E-mail: Ahsharaf@tamkeen.bh
- **Dr. Omar Al-Abbasi** | Head of Mechanical Eng Dept - University of Bahrain. E-mail: omabbasi@uob.edu.bh