

# IRFAN MUHAMMAD JAFFAR

Petroleum Engineer | PEC-PETGAS/004425

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## ABOUT ME

Petroleum Engineer with a B.E. from Mehran UET, experienced in technical sales, field operations, and AI-driven solutions. Through internships at SSGC and OGDCL, and my current role as a Technical Sales Engineer at DrillExec International, I've developed skills in OEM management, equipment servicing, and drilling optimization. Applying expertise to deliver high-quality field services, enhance operational efficiency, and support the company's mission of innovation and excellence in energy services.

## EDUCATION

**Mehran University of Engineering and Tech, Jamshoro, Sindh**

Bachelor of Petroleum and Natural Gas Engineering (B.E)

**September 2019-December 2023**

**CGPA: 2.97/4**

## EXPERIENCE

### DRILLEXEC INTERNATIONAL

**11 April 2024-Present**

Technical Sales Engineer

Karachi

- Sourced and negotiated with new international suppliers, expanding the product portfolio and supporting new market entry.
- Led client prequalification efforts, registering OEMs with E&P companies for tender eligibility.
- Reviewed and submitted technical and commercial proposals aligned with tender requirements and industry standards.
- Handled bid bond and performance bond requirements in coordination with banks and financial institutions.
- Managed documentation: NDAs, contracts, POs, and payment terms (LCs, 30-day credit).
- Delivered online technical demos with OEMs, showcasing solutions to client teams.

### SUI SOUTHERN GAS COMPANY INTERNSHIP (SSGC)

**July 2023-August 2023**

- Familiar with regulatory standards, safety protocols, and emergency response in the oil & gas sector. Karachi
- Observed pipeline integrity management procedures, including inspection, maintenance, and leak detection practices.
- Strengthened my career foundation by bridging academic concepts with field operations — preparing me for future roles in drilling, reservoir, or production engineering.
- Had the opportunity to interact with experienced professional engineers, which boosted my confidence and gave me a clearer vision of how to conduct myself professionally in future field roles.

### OIL AND GAS DEVELOPMENT COMPANY LIMITED INTERNSHIP (OGDCL)

**May 2022-June 2022**

- Gained hands-on experience in gas processing, well drilling, maintenance, and optimization. Qadirpur Gas-Field
- Contributed to reports based on data analysis to improve operational decision-making.
- Observed and learned about well drilling operations and basic maintenance procedures.
- Interacted with engineers and technicians, gaining insights into operational tasks and teamwork.
- Adapted to working in a field environment, managing challenges such as heat and long working hours.

### BBSHRRDB ROBOTICS AND AUTOMATIC SYSTEM INTERNSHIP

**October 2022-April 2023**

- Gained skills in safety protocols, troubleshooting, and system diagnostics. Mehran UET Research Department
- Developed hands-on experience with Arduino and embedded systems.
- Acquired foundational knowledge in machine learning, neural networks, and robotics.

## Projects

### Intelligent Robotic Arm for Industrial Automation

**Group-Work**

- Built and programmed a 5-DOF robotic arm using Arduino and C++.
- Integrated sensors and machine learning for object detection and classification.
- Built a real-time control interface in python with safety and fault diagnostics.

### AI-Driven Gas Pipeline Leak Detection System

- Developed ML models for pipeline leak detection using sensor data.
- Trained Random Forest and SVM classifiers on historical pressure/flow data.
- Proposed SCADA integration for real-time alerts and predictive maintenance.

### AI-Optimized Drilling to Reduce Mud Loss across Various Lithologies

- Applied AI to optimize drilling fluid performance and simulate mud loss across various lithologies.
- Evaluated cost-efficiency and environmental impact of AI-driven fluid strategies.
- Provided insights to minimize formation damage and improve drilling efficiency.

## TECHNICAL SKILLS

**Languages:** Python, C++, MATLAB, HTML, CSS

**Frameworks:** Beautiful Soup, Tensor Flow, Pandas, NumPy, Scikit-learn, PyTorch, OpenCV, Matplotlib, Seaborn

**Tools & Platforms:** Proper, Reveal, Eclipse, MBAL, Jupyter Notebooks, VS Code, PyCharm, Git, GitHub,

**Concepts:** Deep Learning, NLP, ML, SCADA, OOPs

## ACHIEVEMENTS

- Successfully selected for a highly competitive government internship focused on Robotics and Automation Systems.
- I've negotiated and secured OEM contracts exceeding \$1M.
- Runner up in Petro-Quiz Competition 2022

**Muet Szab Khairpur Campus**