

## Digital Oilfield & AI-Based Real-Time Operations Monitoring

*Istanbul (Turkey)*

*11 - 15 October 2026*

UK Training

# PARTNER



## Digital Oilfield & AI-Based Real-Time Operations Monitoring

Code: OG32 From: 11 - 15 October 2026 City: Istanbul (Turkey) Fees: 4900 Pound

### Introduction

The digital oilfield concept integrates advanced technologies, data analytics, and automation to enhance operational efficiency across the petroleum value chain. By combining real-time monitoring with AI-powered analytics, petroleum companies can optimize production, reduce downtime, and make proactive operational decisions.

This course provides participants with the expertise to design and implement AI-driven monitoring systems that process live data streams, detect anomalies instantly, and support faster, data-backed decision-making in complex petroleum operations.

### Course Objectives

- Understand the fundamentals of digital oilfield systems and infrastructure.
- Apply AI techniques for real-time operational monitoring and decision-making.
- Integrate IoT sensors and SCADA systems with AI analytics platforms.
- Develop predictive maintenance strategies based on real-time data.
- Automate performance tracking and reporting workflows.
- Detect and mitigate operational risks instantly through AI alerts.
- Enhance collaboration between operational and data science teams.
- Implement continuous improvement frameworks for long-term efficiency.

### Course Outlines

#### Day 1: Fundamentals of the Digital Oilfield and AI Integration

- Overview of the digital oilfield concept.
- Core components and architecture of real-time monitoring systems.
- Role of AI in transforming operational workflows.
- Introduction to IoT and sensor-based data collection.
- Common challenges in real-time petroleum operations.
- Case examples of AI integration in oilfield monitoring.

#### Day 2: Data Acquisition, Processing, and Integration

- Real-time data acquisition from field equipment.
- Data preprocessing techniques for live streams.
- Integrating operational data into AI pipelines.
- Ensuring data quality and reliability.
- Leveraging edge computing for faster processing.
- Practical exercise: setting up a data ingestion pipeline.

#### Day 3: AI Models for Real-Time Monitoring



- Machine learning algorithms for anomaly detection.
- AI-driven predictive maintenance approaches.
- Time-series forecasting for production and equipment performance.
- Creating custom AI alerts for operational teams.
- Optimizing AI models for speed and accuracy.
- Practical exercise: building an anomaly detection model.

#### Day 4: Operational Optimization and Decision Automation

- AI-based optimization for drilling, production, and processing.
- Automating decision workflows with AI recommendations.
- Integrating AI dashboards into control rooms.
- Minimizing downtime with automated shutdown protocols.
- Streamlining multi-site operations with centralized monitoring.
- Practical exercise: developing an AI-driven operations dashboard.

#### Day 5: Performance Review and Future Strategies

- Measuring success through operational KPIs.
- Continuous improvement cycles in digital oilfield operations.
- Updating AI models with new data.
- Future trends in AI-powered oilfield monitoring.
- Common pitfalls and how to avoid them.
- Practical exercise: final project presentation and feedback.

#### Why Attend this Course: Wins & Losses!

- Gain cutting-edge knowledge of digital oilfield operations.
- Learn to design AI-driven monitoring systems.
- Enhance operational safety and reduce downtime.
- Improve decision-making speed and accuracy.
- Implement predictive maintenance for cost savings.
- Experience hands-on AI tools and dashboards.
- Build skills to lead digital transformation projects.
- Stay ahead with emerging technologies in petroleum operations.

#### Conclusion

AI-based real-time monitoring in the digital oilfield is transforming how petroleum operations are managed. By leveraging live data, advanced analytics, and automation, companies can achieve higher efficiency, improved safety, and more profitable outcomes.

This course equips participants with the tools and knowledge to design, implement, and maintain AI-powered monitoring systems that deliver measurable operational improvements and long-term value.



## Blackbird Training Clients



MANNAI Trading  
Company WLL,  
Qatar



Alumina Corporation  
Guinea



Booking.com  
Netherlands



Oxfam GB International  
Organization,  
Yemen



Capital Markets  
Authority,  
Kuwait



Waltersmith Petroman Oil Limited  
Nigeria



Qatar National Bank  
(QNB),  
Qatar



Qatar Foundation,  
Qatar



AFRICAN UNION ADVISORY  
BOARD ON CORRUPTION,  
Tanzania



KFAS  
Kuwait



Reserve Bank of  
Malawi,  
Malawi



Central Bank of Nigeria  
Nigeria



Ministry of Interior,  
KSA



Mabruk Oil Company  
Libya



Saudi Electricity  
Company,  
KSA



BADAN PENGELOLA  
KEUANGAN Haji,  
Indonesia



NATO  
Italy



ENI CORPORATE  
UNIVERSITY,  
Italy



Gulf Bank  
Kuwait



General Organization for  
Social Insurance  
KSA



Defence Space Administration  
Nigeria



National Industries  
Group (Holding),  
Kuwait



Hamad Medical  
Corporation,  
Qatar



USAID  
Pakistan



STC Solutions,  
KSA



North Oil company,



EKO Electricity



Oman Broadband



UNITED NATIONS  
UN.



Authority for  
Electricity Regulation, Oman

UK Training  
**PARTNER**



## Blackbird Training Categories

### Management & Admin

Entertainment & Leisure  
Professional Skills  
Finance, Accounting, Budgeting  
Media & Public Relations  
Project Management  
Human Resources  
Audit & Quality Assurance  
Marketing, Sales, Customer Service  
Secretary & Admin  
Supply Chain & Logistics  
Management & Leadership  
Agile and Elevation

### Technical Courses

Artificial Intelligence (AI)  
Sustainability, ESG & Corporate Responsibility  
Advanced Courses  
Hospital Management  
Public Sector  
Special Workshops  
Oil & Gas Engineering  
Telecom Engineering  
IT & IT Engineering  
Health & Safety  
Law and Contract Management  
Customs & Safety  
Aviation  
C-Suite Training

