**AI**

**Custom Solutions**

# INDUSTRIAL AUTONOMY

## WITH AI & ML

## SMHcoders
*Let's Digitalize Your Business..*

## Oil & Gas
## Solutions Portfolio

# About SMHcoders

SMHcoders is a UAE-based software solutions company specializing in Artificial Intelligence (AI) and Machine Learning (ML), serving diverse industrial segments. With expertise in predictive analytics, computer vision, chatbot development and AI/ML integrations, we help industries achieve smarter decisions, optimized operations and sustainable growth.

## Challenges in the Oil & Gas Industry

- High operational costs due to aging infrastructure and asset failures

- Unplanned downtime of critical equipment leading to production losses

- Workforce safety risks in hazardous environments (offshore, refineries, pipelines)

- Data silos across exploration, drilling, refining, and distribution

- Environmental compliance with stricter emission and ESG standards

# Oil & Gas Industries

## Services

**01** AIChatbot Development

**02** Natural Language Processing

**03** Predictive Modelling

**04** Computer Vision

**05** AI Development Services

**06** Web Development

**07** Mobile App Development

**08** Chat GPT Integrations

## Solutions

**Advanced Process Control (APC) and AI-Based Controllers**

**Autonomous Process Control System for Oil and Gas Plants**

**AI-Driven Time Series Forecasting and Alarm System**

**State-Based Event Management and Auto-Execution Engine**

**Annulus Pressure Monitoring and Leak Detection System**

**AI-Driven Virtual Flow Meter (VFM) and Soft Sensing System**

**Integrated Prioritization and Autonomous Maintenance Scheduling**

**AI-Based Production Optimization from Well to Field**

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**AI-Based Production Optimization from Well to Field**
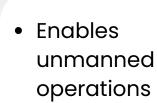
**Automated P&ID Generation Tool**

**AI-Powered Predictive Maintenance and Anomaly Detection**

# Key Benefits

- Improves stability and yield
- Reduces interventions
- Lowers energy use and variability

- Enables unmanned operations
- Cuts costs and errors
- Maximizes output with less energy

- Anticipates risks
- Improves maintenance and tuning
- Reduces shutdowns and containment loss

- Automates procedures
- Eliminates errors
- Ensures safe, repeatable operations

- Ensures well integrity and safety
- Prevents environmental harm
- Supports compliance

- Maximizes recovery
- Minimizes gas and energy use
- Improves field production balance

- Cuts maintenance backlog
- Boosts asset uptime
- Enables predictive maintenance

- Maximizes field recovery
- Reduces backpressure losses
- Extends reservoir life

- Cuts CAPEX/OPEX
- Enables real-time monitoring
- Improves field optimization

- Maximizes overall field recovery
- Minimizes backpressure losses
- Extends reservoir life

- Speeds up engineering workflows
- Reduces human error in design
- Enhances digital twin integration

- Prevents costly equipment failures
- Extends asset life
- Improves safety and reliability