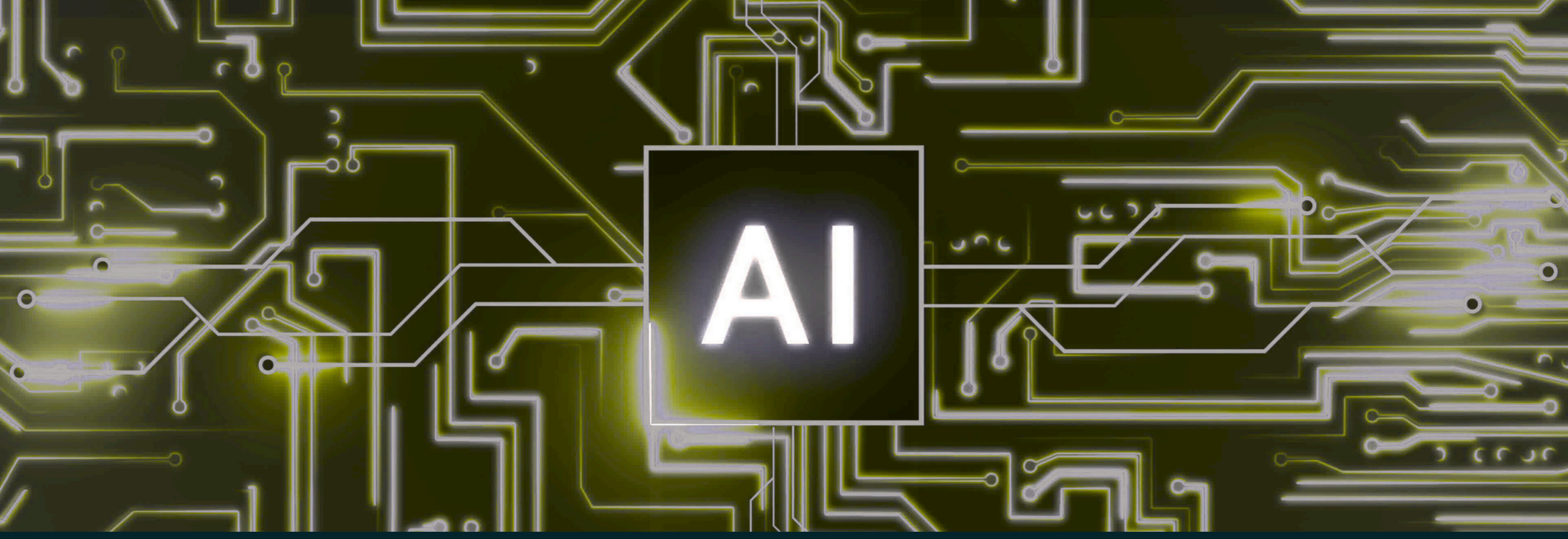

Custom Solutions

INDUSTRIAL AUTONOMY

WITH AI & ML

SMHcoders

Let's Digitalize Your Business..

Power Industries
Solutions Portfolio

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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 Power Industry

- Grid instability from fluctuating demand and renewable integration
- Aging assets (turbines, transformers, transmission lines) causing failures
- High energy losses in transmission and distribution
- Inefficient forecasting of demand, supply, and outages
- Regulatory pressure to decarbonize and shift to cleaner energy sources

SMHcoders

Let's Digitalize Your Business..

Power 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

Autonomous Load Dispatch and Optimization

AI-Based Predictive Maintenance of Gas and Steam Turbines

Autonomous Fuel Consumption Management for Thermal Power Plants

Real-Time Emission Control and Regulatory Compliance System

Virtual Power Plant (VPP) Autonomous Coordination System

AI-Powered Grid Stability and Blackout Prevention System

Intelligent Peak Load Management System

Autonomous Smart Grid Energy Storage Optimization

AI-Based Fault Detection, Localization, and Autonomous Restoration

Autonomous Condition-Based Maintenance with SAP Notification Generation

Intelligent Renewable Forecasting and Integration

AI-Powered Autonomous Cybersecurity System for Grid Protection

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Key Benefits

- Minimized operational costs
- Optimal resource utilization
- Enhanced grid reliability and stability

- Cuts downtime and shutdowns
- Improves reliability and lifespan
- Optimizes maintenance and workforce

- Cuts fuel use
- Lowers emissions, ensures compliance
- Boosts efficiency

- Ensures compliance
- Controls emissions proactively
- Reduces environmental impact and penalties

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

- Prevents grid failures
- Improves reliability and stability
- Cuts restoration costs

- Cost-efficient peak load handling
- Reduced strain on infrastructure
- Enhanced demand-side management

- Speeds fault detection and isolation
- Shortens outages
- Improves satisfaction and grid resilience

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

- Real-time anomaly detection
- Automated SAP PM integration
- Faster fault isolation
- Reduced downtime
- Improved asset tracking
- Consistent maintenance data

- Increases renewable penetration
- Cuts curtailment losses
- Optimizes conventional plant operations

- Real-time threat prevention
- Lower cybersecurity risks
- Improved resilience and data integrity