Global Learning for Operational Leaders

MAINTENANCE AND ENGINEERING | ME-002

# AI and IoT for Electrical Engineers: The Future of Smart Systems


**Contact**
+31 85 7444446
info@aractech.com
https://aractech.com

**Address**
Waarderweg 50, 2031PB Haarlem - Netherlands.

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# Course content

## Why Attend

This essential AI and IoT for Electrical Engineers Course is meticulously designed to address the digital transformation sweeping the electrical engineering field.

The convergence of Artificial Intelligence (AI) and the Internet of Things (IoT) is fundamentally reshaping the design, operation, and maintenance of electrical systems, creating a critical need for upskilled professionals.

## Course Methodology

## Course Objectives

• By the end of this training course, participants will be able to integrate AI and IoT solutions into modern electrical systems. This course will provide the foundational knowledge and practical skills required to excel in the era of smart technology.

• Understand the core principles of AI and IoT and their transformative impact on electrical engineering.

• Explore AI-driven automation and intelligent decision-making processes for electrical systems.

• Implement robust, IoT-enabled monitoring solutions utilizing real-time data analytics.

• Develop and apply predictive maintenance strategies powered by AI algorithms and IoT sensor data.

• Optimize energy management and distribution through AI-powered smart grids and IoT sensors.

## Target Audience

• This AI and IoT for Electrical Engineers Course is tailored for professionals seeking to lead innovation in their organizations. It is ideally suited for individuals who design, maintain, or optimize electrical and automated systems.

• Electrical Engineers and Technicians

• Power System and Energy Professionals

• Automation and Control Engineers

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# Course outline

## Detailed course outline

Day-by-day outline for AI and IoT for Electrical Engineers: The Future of Smart Systems.

## Day 1 - Introduction to AI and IoT in Electrical Engineering

• Overview of AI and IoT technologies

• How AI and IoT are transforming electrical engineering

• Key components of smart electrical systems

• AI-powered data processing and IoT-enabled connectivity

• Case studies of AI and IoT applications in electrical systems

## Day 2 - AI for Smart Electrical Systems and Automation

• AI-driven automation in power and electrical systems

• Machine learning algorithms for electrical engineering

• AI-powered control systems and real-time decision-making

• AI in fault detection and system diagnostics

• Hands-on session: Implementing AI in electrical automation

## Day 3 - IoT-Enabled Monitoring and Predictive Maintenance

• IoT sensors and data collection for electrical equipment

• Real-time monitoring and remote diagnostics using IoT

• Predictive maintenance with AI and IoT integration

• Smart asset management and failure prevention strategies

• Hands-on session: IoT-based monitoring and alert systems

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## Day 4 - Smart Grids, Energy Management, and AI Optimization

• AI and IoT applications in smart grid technology

• Energy efficiency optimization using AI algorithms

• AI-driven load forecasting and energy distribution

• IoT-enabled renewable energy integration

• Hands-on session: AI-powered energy analytics and management

## Day 5 - Future Trends and Implementation Strategies

• Emerging trends in AI and IoT for electrical engineering

• AI in cybersecurity for electrical and power systems

• Challenges in adopting AI and IoT in electrical projects

• Roadmap for implementing AI and IoT in electrical networks

• Final case study and group discussion on future-ready smart systems

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# Seminar dates

## Available seminar dates

Live dates and pricing for AI and IoT for Electrical Engineers: The Future of Smart Systems generated from the course details page.

| Date | Location | Format | Fee |
|---|---|---|---|