

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

Course code: ME-002



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— Workshop Overview

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. This comprehensive AI Training Course For Electrical Engineers delves into how AI algorithms drive predictive analytics and energy optimization, while IoT networks enable real-time data acquisition from sensors and intelligent devices. Participants will gain practical insights into developing and managing smart grids, implementing AI-driven fault detection systems, and leveraging IoT Course for Electrical Engineers principles for enhanced monitoring. The curriculum is structured to empower engineers to harness these disruptive technologies, leading to significant improvements in system efficiency, reliability, and automation for future-ready electrical infrastructure.

Why Attend

This course uses instructor-led sessions, guided discussion, and practical exercises built around Day One: Introduction to AI and IoT in Electrical Engineering, Day Two: AI for Smart Electrical Systems and Automation, Day Three: IoT-Enabled Monitoring and Predictive Maintenance, and day four: smart grids, energy management, and ai

Who Should Attend

This

— Learning Objectives

- 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.
- Enhance industrial automation by integrating AI and IoT within control systems.
- Gain hands-on experience with practical AI and IoT applications relevant to electrical engineering challenges.

Course Outline

DAY
1

Day One: 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

Day Two: 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

Day Three: 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

DAY
4

Day Four: 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

Day Five: 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

— Upcoming Classroom Dates

DATE	LOCATION	FEE
4 - 8 January 2027	Amsterdam - Netherlands	€1,900
1 - 5 February 2027	London - United Kingdom	€2,100
1 - 5 March 2027	Istanbul - Türkiye	€1,400
5 - 9 April 2027	Vienna - Austria	€2,250
3 - 7 May 2027	Barcelona - Spain	€1,600
7 - 11 June 2027	Paris - France	€2,250
5 - 9 July 2027	Frankfurt - Germany	€1,700
2 - 6 August 2027	Barcelona - Spain	€1,600

— Certificate and Registration

Participants who attend and complete the full programme receive a SPARK Training Certificate of Completion. For registration, in-house delivery, or availability questions, contact info@sparktraining.eu or +31 85 115 0004.