

Artificial Intelligence (AI)-Based Cybersecurity Defense Strategies

Professional training programme



SPARK TRAINING

Professional training courses for leaders, specialists, and organizations seeking practical capability development.

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— Workshop Overview

This Artificial Intelligence (AI)-Based Cybersecurity Defense Strategies training course provides an in-depth exploration of how artificial intelligence (AI) can be leveraged to enhance cybersecurity defense strategies. Participants will learn about the latest AI technologies and methodologies used to identify, prevent, and respond to cyber threats. The training course covers practical applications, case studies, and hands-on exercises to equip professionals with the skills needed to implement AI-based cybersecurity solutions effectively.

Why Attend

This training course will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. This training course is interactive and challenges one to think. The tutor will guide and facilitate learning, using direct input, discussions, case studies, exercises and video

Who Should Attend

Cybersecurity professionals
IT managers and administrators
Data scientists and AI engineers
Security analysts and consultants
Anyone interested in the intersection of AI and cybersecurity

— Learning Objectives

- Understand the fundamentals of AI and its application in cybersecurity
- Learn how to use AI for threat detection and response
- Explore machine learning algorithms for cybersecurity
- Gain insights into deep learning techniques for advanced threat analysis
- Develop strategies for integrating AI into existing cybersecurity frameworks
- Understand the ethical and legal considerations of using AI in cybersecurity

Course Outline

**DAY
1**

Day One: Introduction to AI and Cybersecurity

- Overview of AI technologies and their relevance to cybersecurity
- The role of AI in modern cybersecurity strategies
- Current trends and challenges in AI cybersecurity
- Case studies of AI applications in cybersecurity
- Interactive session: Identifying AI opportunities in your organization's cybersecurity strategy

**DAY
2**

Day Two: Machine Learning for Cyber Threat Detection

- Basics of machine learning algorithms and their applications in cybersecurity
- Supervised vs. unsupervised learning techniques
- Implementing machine learning models for threat detection
- Case studies of machine learning in threat detection
- Interactive session: Developing a machine learning model for a sample cyber threat scenario

**DAY
3**

Day Three: Deep Learning for Advanced Threat Analysis

- Introduction to deep learning and neural networks
- Applications of deep learning in advanced threat analysis
- Techniques for training and deploying deep learning models
- Case studies of deep learning in cybersecurity
- Interactive session: Building and testing a deep learning model for threat analysis

**DAY
4**

Day Four: AI-Driven Incident Response

- Automated incident response using AI technologies
- AI tools for real-time threat analysis and response
- Developing an AI-driven incident response plan
- Case studies of AI-driven incident responses
- Interactive session: Creating an AI-driven incident response plan for a sample organization

**DAY
5**

Day Five: Integration and Ethical Considerations

- Integrating AI into existing cybersecurity frameworks
- Best practices for AI implementation in cybersecurity
- Ethical and legal considerations in AI cybersecurity
- Preparing for future developments in AI and cybersecurity

- Interactive session: Developing an integration plan for AI in your organization's cybersecurity strategy

— Upcoming Classroom Dates

DATE	LOCATION	FEE
12 - 16 October 2026	Vienna - Austria	€2,125
19 - 23 October 2026	Istanbul - Türkiye	€1,425
2 - 6 November 2026	Vienna - Austria	€2,125
9 - 13 November 2026	Barcelona - Spain	€1,925
14 - 18 December 2026	Paris - France	€2,250
21 - 25 December 2026	Barcelona - Spain	€1,925
18 - 22 January 2027	London - United Kingdom	€2,100
15 - 19 February 2027	Frankfurt - Germany	€1,625

— 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.