

DIGITAL SECURITY AND ARTIFICIAL INTELLIGENCE IN ELECTRONIC ARCHIVING

Cairo - Egypt

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Introduction

The increasing reliance on digital systems for storing and managing records has made electronic archiving one of the most critical functions in both public and private institutions. Protecting this information requires advanced digital security strategies and the integration of artificial intelligence (AI) to ensure data integrity, authenticity, and accessibility.

This course from Gentex Training Center provides participants with a comprehensive understanding of how AI technologies can enhance the security, automation, and intelligence of electronic archiving systems. It also explores cybersecurity frameworks, data protection techniques, and innovative AI tools that help prevent unauthorized access and data loss.

Participants will gain insights into secure digital record management, the use of AI in threat detection, and methods for automating archival operations while maintaining compliance with international and national standards. The course bridges the gap between technology and information governance, enabling organizations to build smarter, safer, and more efficient digital archives.

Digital Security and Artificial Intelligence in Electronic Archiving Course Objectives

- Understand the core principles of digital security and their application in electronic archiving environments.
- Identify common security threats, vulnerabilities, and risks that affect digital repositories.
- Learn how AI technologies such as machine learning, natural language processing, and intelligent automation can improve archiving efficiency and security.
- Apply digital authentication, encryption, and access control mechanisms to safeguard archived data.
- Explore AI-driven methods for classifying, indexing, and retrieving archival documents.

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- Design a secure framework for managing digital archives that complies with data protection laws and standards.
- Implement preventive measures and response strategies for cybersecurity incidents within archival systems.
- Build a culture of data governance, accountability, and continuous improvement in electronic recordkeeping.

Course Methodology

This interactive training combines expert lectures, real-world case studies, group discussions, and practical workshops. Participants will engage in simulations and problem-solving exercises that mirror modern digital archiving environments, ensuring a practical learning experience.

Who Should Take This Course

- Digital archiving and record management professionals
- IT and cybersecurity specialists
- Data governance and compliance officers
- Information system administrators
- Archivists and documentation managers
- Government and corporate digital transformation teams

Digital Security and Artificial Intelligence in Electronic Archiving Course Outlines





Day 1: Fundamentals of Digital Security in Electronic Archiving

- Understanding electronic archiving systems and their vulnerabilities
- Components of digital security architecture
- Key principles: confidentiality, integrity, availability
- Common threats: hacking, malware, phishing, ransomware
- Establishing secure access control and user authentication

Day 2: Cyber Risk Assessment and Protection Strategies

- Risk identification and classification in archival systems
- Designing security policies and procedures
- Implementing firewalls, encryption, and network protection
- Data loss prevention (DLP) and backup strategies
- Case study: Analyzing a security breach in an archival system

Day 3: Artificial Intelligence Foundations in Digital Security

- Introduction to AI, machine learning, and deep learning
- Role of AI in cybersecurity and archiving
- Pattern recognition for detecting anomalies and unauthorized access
- Predictive analytics for security threat forecasting
- Ethical and governance issues in AI-based systems



Day 4: Intelligent Automation in Electronic Archiving

- AI-powered document classification and metadata tagging
- Smart indexing, searching, and retrieval tools
- Optical character recognition (OCR) and natural language processing (NLP)
- Automating approval workflows and version control
- Integrating AI tools into digital archive management platforms

Day 5: Data Protection and Privacy in the Digital Era

- Principles of data protection and privacy laws (GDPR, ISO 27001, etc.)
- Encryption and anonymization of sensitive data
- Managing digital identities and access privileges
- Balancing security with usability in archival systems
- Workshop: Designing a secure data retention policy

Day 6: AI-Driven Cyber Threat Detection and Response

- AI models for real-time monitoring and intrusion detection
- Using machine learning for automated incident response
- Threat intelligence systems and predictive defense mechanisms
- Case study: Applying AI to detect archive manipulation attempts
- Continuous learning and system adaptation in AI tools

Day 7: Security Governance and Compliance Frameworks

- Developing information security policies for archiving institutions

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- Governance models for secure digital archives
- Auditing, compliance, and certification standards
- Role of leadership in digital risk management
- Framework alignment with ISO/IEC 27037 and 15489

Day 8: Integrating AI and Security in Archival Operations

- Building synergy between AI algorithms and human oversight
- AI-supported workflow optimization and resource management
- Evaluating system performance and efficiency
- Practical exercise: Designing a hybrid AI-security model
- Reducing costs and enhancing reliability through intelligent systems

Day 9: Future Trends in AI and Digital Security

- Emerging technologies: quantum computing, blockchain, and zero-trust models
- AI ethics and transparency in automated decision-making
- Sustainable and green approaches to digital archiving
- Preparing organizations for evolving cybersecurity challenges
- Case study: Future-ready smart archive systems

Day 10: Practical Implementation and Capstone Workshop

- Developing a comprehensive digital security plan for an archival organization
- Designing an AI-integrated archiving system prototype



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- Risk mitigation and incident management plan presentation
- Group project: Building secure and intelligent archival workflows
- Review and discussion of lessons learned

Conclusion

By successfully completing this 10-day course with Gentex Training Center, participants will gain the ability to design, secure, and manage intelligent electronic archiving systems powered by AI. They will understand how to integrate cybersecurity measures and artificial intelligence to protect organizational data, enhance operational efficiency, and ensure information authenticity and accessibility. This knowledge will enable them to play a key role in shaping the future of secure digital transformation.

