Cybersecurity and Data Protection in Archives

Safeguarding Historical and Digital Records by Saša Đukić

Introduction

Archives preserve historical, legal, and cultural records

Digital transformation increases vulnerability to cyber threats

Importance of integrating cybersecurity and data protection

Key Cybersecurity Threats to Archives

Unauthorized Access and Ransomware Attacks

Insider Threats Overlap with Physical Security Threats

Data Corruption and Manipulation

Role of Cybersecurity in Archives

Prevent unauthorized access or tampering

Protect sensitive digital repositories

Secure classified documents and personal data

Data Protection Strategies

Multi-Factor Authentication (MFA) & Role-Based Access Control (RBAC) and Data Encryption (AES-256, TLS 1.3)

01 Regular Backups (Cloud + Offline)

02 Checksum Verification and File Integrity Monitoring

03 Legal Compliance (e.g., GDPR)

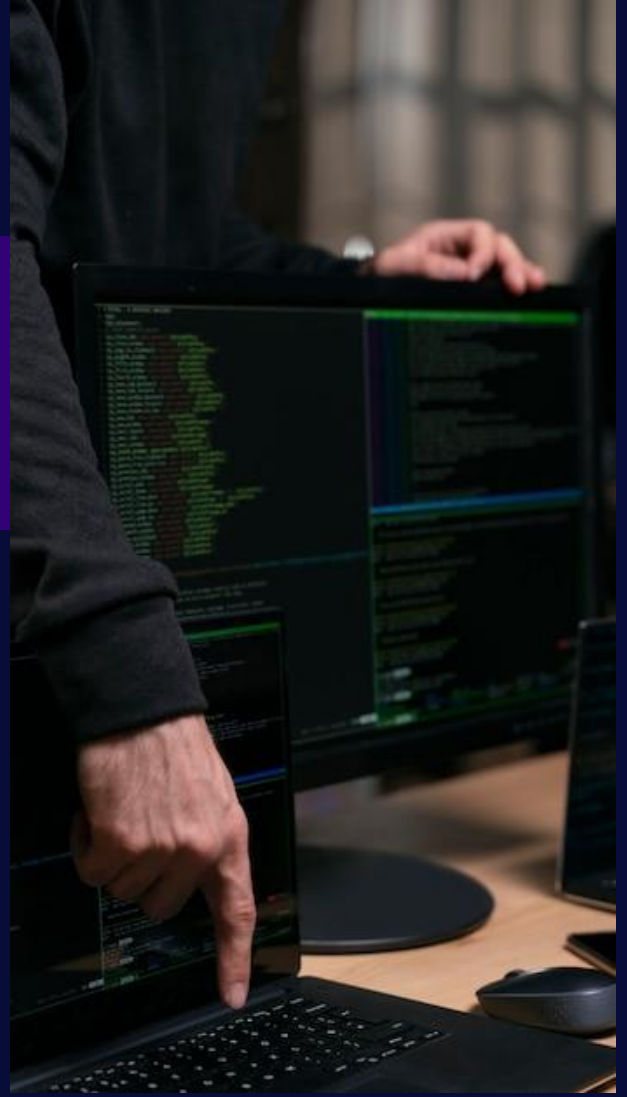
GDPR in the European Union

Protects personal data of EU citizens

Principles: Lawfulness, Data Minimization, Accuracy

Rights: Access, Rectification, Erasure (with archival exceptions)

Accountability and Cross-Border Data Transfer Regulations



Emerging Technologies for Archives

Blockchain: Immutable data storage

01

AI: Threat detection and anomaly monitoring

02

Cloud: Redundant and secure data storage

03

Zero Trust Architecture (ZTA): Continuous identity verification

Best Practices

Use international frameworks (NIST, ISO/IEC 27001)

Regular security audits

Employee cybersecurity training

Implement Zero Trust security models

Conclusion

Cybersecurity and data protection are essential for digital archives

01

Legal and technical measures must work together

02

Secure archives = trusted, preserved history for future generations

Conclusion

As archives transition to digital formats, the intersection of cybersecurity and data protection becomes vital. Institutions must implement robust security frameworks, adhere to regulatory guidelines, and leverage emerging technologies to safeguard archival data from cyber threats.