

Chapter 7

Theoretical and Conceptual Frameworks for Understanding Artificial Intelligence in Records and Information Management

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ABSTRACT

Artificial Intelligence has transformed the RIM arena by changing how organizations create, store, and retrieve records. What was once left to traditional approaches now uses data analytics, pattern recognition, automation, and NLP capabilities through AI to redefine efficiency, accuracy, and scalability in handling records and information. Although these changes can provide better processes that comply with the new standards, there are challenges of ethics, technology, and the organization. This chapter delves into how AI might help reduce the complexity involved in handling large volumes of data by providing theoretical frameworks as well as concrete methodologies to integrate AI with RIM. It also explores trends like intelligent automation and predictive analytics and their applications in subdomains such as archive management and digital preservation. By touching upon problems such as data privacy and ethics, the chapter provides an overarching framework for adoption of AI, giving valuable insights to practitioners, researchers, and policymakers alike.

INTRODUCTION AND OVERVIEW OF ARTIFICIAL INTELLIGENCE (AI) IN RECORDS AND INFORMATION MANAGEMENT (RIM)

AI has transformed RIM by streamlining processes, enhancing accuracy, and improving data retrieval functionality. Classical RIM systems were heavy with manual processing in document classification, storage, and compliance. Nowadays, however, AI-based solutions offer automation, predictive analytics, and smart decision-making capabilities to make these functions simpler and highly efficient as well as highly scalable.

AI technologies have revolutionized RIM in many sophisticated capabilities. Machine Learning (ML) allows systems to examine patterns of records, document classification, and retention requirement predictions from past experiences. Natural Language Processing (NLP) makes metadata extraction possible, text summarization, and automatic classification of records for more efficient search and organization. Robotic Process Automation (RPA) automates routine processes like data entry, document classification, and workflow approval, minimizing the need for human intervention and potential errors. Cognitive computing improves decision-making by mimicking human thought and processing unstructured data, including emails and multimedia files. Deep Learning (DL) aids in image and handwriting recognition, enhancing digital archiving and retrieval effectiveness.

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