

Current Status and Development Trend of Applying Artificial Intelligence to Records Management in the Digital Age

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ABSTRACT

With the rapid development of artificial intelligence (AI), various government agencies pay much attention to the use of the technology. The situation also occurs in the field of records management, such as capturing metadata of records and ensuring its accuracy, maintaining and protecting it from unauthorized access and damage until it reaches the end of its retention period, disposing of the records once their retention period is past. Also, as we reach the new millennium, high volumes of records escalate the difficulty of records management by increasing the staff needed. There is an acute need for the records manager to take advantage of artificial intelligence to be more efficient and effective. Despite the fact that artificial intelligence has been progressing over the decades, little research has taken place on providing persuasive cases of applying artificial intelligence to records management to date, analyzing the required resources of applying or elaborating the integration of artificial intelligence and records management tools. Studies have revealed for the reluctance of records manager for not utilizing artificial intelligence technologies in records management include lack of training in artificial intelligence, and they avoid taking the risk in undertaking integrated systems that may waste time and resources. Therefore, understanding the current state and development trend of applying artificial intelligence to records management is really an imperative task for both managers and organizations. The purpose of the study is to shed

some light on progress made by developed countries in helping the records manager with artificial intelligence and to make suggestions on improving the efficiency and effectiveness of records management with artificial intelligence. The related projects and websites of the United States, the United Kingdoms and Australia are studied. The study has revealed that machine learning (ML) and natural language processing (NLP) are widely applied by the national archive to records management functions. In the United States, National Archives and Records Administration (NARA) applied these technologies to autocategorization and access restriction checker. In addition, NARA released two open sources of records management tools using machine learning to the organizations in helping agencies automate the classification of records. In the United Kingdoms, The National Archives (TNA) applied artificial intelligence to review the born-digital records that need to be transferred to the national archives with a tool “eDiscovery.” They also hold a machine learning hackathon to inspire the innovative applications. In Australia, National Archives of Australia adopted cognitive computing, machine learning, keywords extraction, and auto-indexing for automation of records management. They also established a research group for the automation of disposal. This study’s results also suggest that government agencies adopt ML and NLP to analyze the contents of records, and then extract the subject, keywords, and the metadata of records. The agencies can furthermore try to design and implement the classification algorithm of ML to determine the retention period of records, appraise the records for transfer into the archives for permanent retention, and even properly redact the private or classified information of records. The findings of the study make a useful contribution to not only the understanding of the current situation but also the identification of the research directions and issues of applying artificial intelligence in records management. The study will further contribute to the national archive administrations by offering suggestions on applications of artificial intelligence with records management lifecycle and also contribute towards the improvement of existing electronic management records technologies and upgrade appropriately.

Keywords: Artificial Intelligence, Machine Learning, Records Management, Electronic Records.