computers

Review

Artificial Intelligence and Knowledge Management: Impacts, Benefits, and Implementation

Hamed Taherdoost [1,*] and Mitra Madanchian [1,2]

[1] Department of Arts, Communications and Social Sciences, University Canada West, Vancouver, BC V6Z 0E5, Canada
[2] Research and Development Department, Hamta Business Corporation, Vancouver, BC V6E 1C9, Canada
* Correspondence: hamed.taherdoost@gmail.com or hamed@hamta.org; Tel.: +1-236-889-5359

Abstract: The process of generating, disseminating, using, and managing an organization's information and knowledge is known as knowledge management (KM). Conventional KM has undergone modifications throughout the years, but documentation has always been its foundation. However, the significant move to remote and hybrid working has highlighted the shortcomings in current procedures. These gaps will be filled by artificial intelligence (AI), which will also alter how KM is transformed and knowledge is handled. This article analyzes studies from 2012 to 2022 that examined AI and KM, with a particular emphasis on how AI may support businesses in their attempts to successfully manage knowledge and information. This critical review examines the current approaches in light of the literature that is currently accessible on AI and KM, focusing on articles that address practical applications and the research background. Furthermore, this review provides insight into potential future study directions and improvements by presenting a critical evaluation.

Keywords: artificial intelligence; knowledge management; knowledge-based system; knowledge acquisition; machine learning

check for updates

Citation: Taherdoost, H.; Madanchian, M. Artificial Intelligence and Knowledge Management: Impacts, Benefits, and Implementation. *Computers* **2023**, *12*, 72. https://doi.org/10.3390/computers12040072

Academic Editors: Phivos Mylonas, Katia Lida Kermanidis and Manolis Maragoudakis

Received: 17 January 2023
Revised: 30 March 2023
Accepted: 30 March 2023
Published: 31 March 2023

1. Introduction

Through the emergence of digital documents, which are attributed to the development of knowledge management (KM) systems, the 20th century saw a major revolution in the administration of information [1,2]. Economic trends in the twenty-first century emphasize the value that KM can provide to businesses. The importance of knowledge and information for economic prosperity has been acknowledged around the globe [3].

Knowledge management is a novel method for locating and arranging specialized knowledge for efficient retrieval and re-use [4]. By managing knowledge both internally and externally, with diverse stakeholders, the intention behind KM is to provide value to companies. Organizations understand the value of knowledge and how to transition from individual to corporate knowledge to ensure their companies thrive sustainably [5]. Information technology, organizational behavior, and human-resource management are just a few of the principles that are combined in KM. Modern businesses need KM because it fosters institutional learning, growth, innovation, and success [6]. Knowledge-based businesses in the market have proven to be more resilient and competitive [7].

Artificial intelligence (AI) has become a cornerstone of KM in the twenty-first century because it has advanced information acquisition, development, and sharing, as well as its effective application inside businesses [8,9]. Numerous studies were carried out to investigate the most recent advancements in KM systems, methods, and best practices, as well as their effects on businesses [9–11]. Furthermore, KM techniques have shown their value in the adoption of instructional technology [12,13]. Various methods, including deep learning, neural networks, and supervised machine learning, are used by AI technologies to replicate human intelligence. The most efficient deep-learning algorithms frequently use a supervised approach, in which enormous amounts of labeled data are used to train the strengths of connections between nodes in massive, layered computational networks, allowing patterns in training data to be employed to produce accurate predictions on future unseen data [14].

It is crucial at this point to explore how the relationship between AI and KM can be used to harness AI more effectively as we move toward a future driven by data and insight. Before determining the link between KM and AI, it is essential to understand how organizations apply knowledge [15]. Organizations have a variety of responsibilities, the meeting and competitiveness of which depend on employees' level of expertise in carrying out crucial duties and their standing in the business [16]. Many KM practitioners and theorists neglect AI as one of the crucial building blocks in the growth, improvement, progression, and expansion of KM [17]. As a field of study, AI was established before KM, has been based and balanced in the computer field for decades, and is widely deployed across many fields [18].

AI and machine learning, including the study of organizational and industrial networks, are proven to be indispensable commercial tools [19,20]. Knowledge management appears to have advanced during the twenty-first century [21]. Furthermore, AI and blockchain have revolutionized how information is gathered, created, shared, and utilized efficiently inside enterprises [22,23]. The ability to run centralized big-data-processing platforms is essential for emerging AI applications, since they manage huge volumes of data streams. The applications offer customized knowledge patterns for certain sets of systems, devices, applications, and people. Centralized KM and knowledge discovery support the provision of system- and application-wide intelligence [24]. The ability of AI to identify contexts, ideas, and meaning are emphasized, along with the emergence of intriguing new cooperation routes between knowledge machines and workers.

This study attempts to integrate the literature on AI with that on KM and focuses primarily on establishing the degree to which AI may generate innovations for effective information and KM. There is an urgent need for academics to offer an overview of the AI-based methodologies that are currently in use in order to comprehend the complexity of this rapidly developing study field. This study addresses these urgent concerns by describing the following conditions:

I. The present state of the integration of AI and KM
II. Developments in different applications of AI and KM
III. Future research directions

This critical review examines the present state of knowledge in light of the available literature on AI and KM, with an emphasis on papers that address practical applications and the background of the study. This review conducts a critical examination to give insights into prospective future research paths and improvements.

2. Background of the Study

Knowledge workers need to be connected with appropriate individuals or resources for knowledge at appropriate times to enable improved decision-making. There may need to be new divisions of labor between humans and intelligent machines that are different from those used previously in organizations due to the emergence of AI's capabilities and how they might be applied to achieve these objectives. New human and machine design mindsets, as well as new skill sets and competencies, are required for these new jobs. To be able to benefit from their artificial partners in KM while avoiding such drawbacks of automation as cognitive algorithmic aversion or complacency, humans need to cultivate perspectives, skills, and work habits. The unique possibilities of AI in KM are only leveraged and realized via an efficient symbiotic collaboration between intelligent systems and knowledge workers, which actions by companies can help to realize.

Many see AI as the next major source of economic value, as a key technology at the forefront of a new technological revolution and industrial change. Its fast expansion presents enterprises with several possibilities inherent in and obstacles to the acquisition of important AI technology [25]. The current tendency in the development of AI technology toward the improvement of entrepreneurs' judgment and decision-making skills is a potent instrument for promoting societal growth and advancement. Consequently, AI technology is gaining in importance [26]. The following sections present the background of KM and AI.

2.1. Knowledge Management (KM)

For more than 30 years, KM has been a crucial field that has explained how information is produced, developed, maintained, and utilized within organization or nations and encourages learning from the past and innovation [27]. As briefly mentioned earlier, KM is now one of the essential elements fin leveraging competitive advantage to achieve organizational success. It has long attracted interest and research indicates that it is an academic discipline, but it can be developed at the organizational level, where it benefits employees and organizations. Knowledge management is an important component, but an organizational theory has not yet been sufficiently established to explain its relevance, nor has it been described it in a way that would capture the attention of companies. Organizations obtain a firmer grasp of their businesses and practices through the knowledge they gain from their assets [28]. A business may benefit from gathering information from its assets by comparing its results, which can help it to navigate rapidly changing industry environments. Similar to how corporations acquire information, people who belong to organizations may develop their talents and provide greater value to these organizations by having a thorough grasp of their organization's knowledge. Although this interpretation is straightforward, pre-existing knowledge poses a hazard, since it makes it more difficult for people and organizations to adjust to change, since they are unable to acquire new information or adopt new practices [29]. According to the study by Suresh et al. [30], learning these new procedures is necessary to enable the new processes of collecting and utilizing pre-existing information at both the organizational and individual levels. However, this can only be accomplished by changing the organizational culture and implementing these new KM techniques.

The correct management of the opportunities presented by AI and the assignment of supporting solutions to previously taken actions raise the organizational practice of KM to a higher real level. This implies that solutions assisted by AI may be given to each stage of a KM process (KMP), enabling stakeholders to take the appropriate action or complete tasks that arise during the real phase more quickly, effectively, and successfully [31].

2.2. Artificial Intelligence (AI)

Along with being a long-standing academic field, AI is one of the most frequently used phrases across a variety of economic sectors [32,33]. At the end of the 1980s and during the early 1990s, AI developed into a multidisciplinary field of study that includes virtual reality, neural networks, expert systems, voice recognition, natural language processing, and robots [34].

Haenlein and Kaplan [32] describe AI as a system's capacity to successfully adapt based on certain inputs and the impact of new knowledge, in order to carry out specific tasks and activities. Additionally, in the same article, the researchers proposed two classification schemes for AI, one of which is based on the stages of development of AI, while the other is based on the intelligence style shown by an AI system. Based on evolutionary phases, an AI system's intelligence may also be relational, emotive, or logical. Accordingly, AI systems are categorized as analytical, sentient, or human-looking, depending on the kind of intelligence they possess. Kumar et al. [35] defined AI as a platform for limitless potential and knowledge that might be constrained by tailored approaches. In addition, Jarrahi [36] defined the term as a set of instruments, strategies, and practices used inside an organizational context in favor of firms and their stakeholders.

Artificial intelligence gives individuals and groups the power and possibility to increase productivity and creativity at all organizational levels and makes it feasible to track results. It makes it easier for businesses to accomplish their objectives in several areas and boosts their profitability, giving them room to become more competitive, decrease expenses, tighten security, and continuously offer data [37]. These changes improve the approaches that may be used in the stages of the KMP. If successfully implemented, the adoption of AI technology in KM provides enormous advantages (Figure 1).

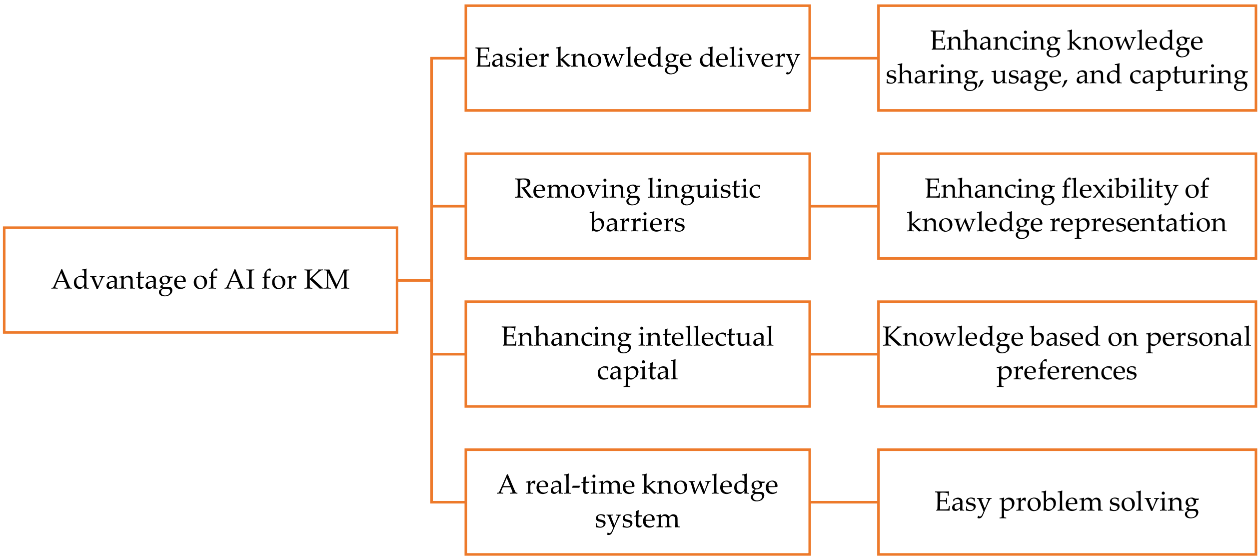

Figure 1. AI Advantages of AI for KM.

3. Research Methodology

This critical analysis aims to assess the present level of AI in KM. For this investigation, all current relevant literature was studied with the carefully. The review approach makes considerable use of structured objectives, the Scopus database, and information-gathering and -analysis techniques. To give a comprehensive and brief assessment of the study subjects, a subset of the essential reporting components for critical reviews was selected.

3.1. Selection

The whole research process relied heavily on data retrieved from Scopus. All possible sources were scoured to ensure the accuracy of the information presented here. However, not all outstanding research works were included in the search parameters. There have been 120 analyses of Scopus results thus far (10 January 2023). In total, 24 were deemed significant (Figure 2). Papers were selected for the evaluation by developing inclusion and exclusion criteria and by identifying essential terms (see Table 1 for more detail).

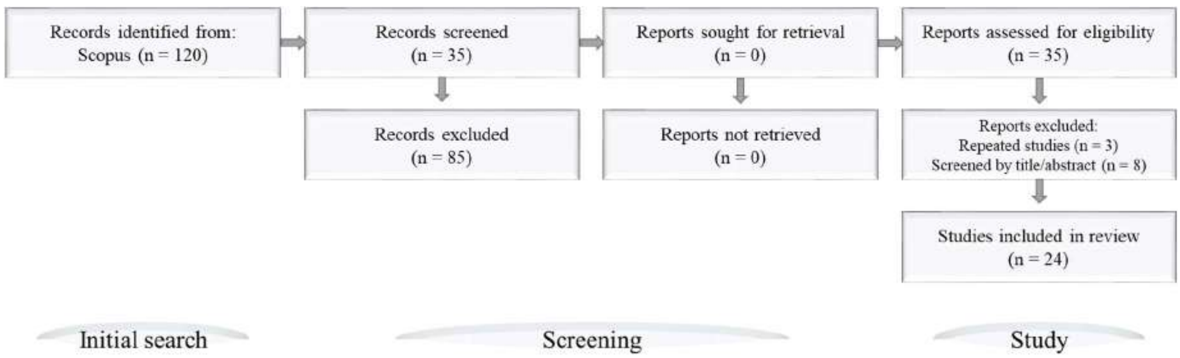

Figure 2. Research-paper selection process (PRISMA method).

Table 1. Search strategy.

Key Terminology	Inclusion Criteria	Exclusion Criteria
"Artificial Intelligence" AND "Knowledge Management"	The combination of AI and KM	Chapters of books, dissertations, conference papers, works based on interviews, and reviews.
"AI" AND "Knowledge Management"	The study may have been published at any time between 2012 and 2022.	Articles in press
"Artificial Intelligence" AND "KM"	The study's coverage is restricted to the journal.	Non-English articles
"AI" AND "KM"		
"Artificial Intelligence" AND "Knowledge based system"		
"AI" AND "Knowledge based system"		

3.2. Limitations

Critical reviews seldom include a comprehensive examination of all relevant research. They are unable to assess the quality of the chosen studies, particularly qualitative studies that lack a design hierarchy [38]. Moreover, critical reviews frequently fail to describe the overall research strategy, the method used to select and exclude articles, the restrictions of the search strategy, the effectiveness of the search procedure, and the methodology of the analysis [39]. This database used for this review, Scopus, limited the review process.

4. Results and Discussion

4.1. Selection Results

This critical evaluation includes 24 articles. The chosen papers are listed below, along with an explanation of the overall categorization findings.

4.2. Present State

Firms are no longer viewed as industries and are instead perceived from a knowledge standpoint. Knowledge is employed as a resource in the current corporate environment [40]. This is particularly true given that successful businesses are those that recognize, assess, and generate knowledge, as well as turning it into assets. To ensure more value is generated to meet the needs of organizations and people, the knowledge life cycle, which begins with progress and data and develops into information, followed by knowledge, need to be shortened. Artificial intelligence capabilities are now added to information and communications technology to ensure that companies take full advantage of what these technologies have to offer.

In the majority of modern businesses, AI tools and systems are utilized extensively. Mathematical logic, search heuristics, and pattern recognition are performed with these instruments. In recent years, KM has attracted a growing amount of interest from industries in which AI advancements are applicable [41]. Organizations can use intelligent agents from various AI-related technologies, such as genetic algorithms, intelligent agents, and neural networks, to perform tasks such as user profiling, semantic analysis of texts, text mining, and pattern matching.

Artificial Intelligence technologies help enterprises to improve KM strategies. From an AI standpoint, knowledge representation requires the familiarization of organizational processes with this information [42]. This results in the automation of KM operations, enabling computer systems to extract information and draw conclusions from knowledge in a machine-interpretable format explored. The question of how much AI can contribute to KM has been explored extensively.

This study presents a critical review obtained from the many papers released each year, including subject categories, keyword density, document format, and author nation distribution. Furthermore, this study concludes with an assessment of research publications on AI and KM in the stated applications that were published between 2012 and 2022.

Table 2 presents the number of articles created for each subject area from 2012 to 2022. Engineering (10 articles) and Computer Science were the major subjects (9 articles). With the growth that Computer Science has experienced since 2019, it is anticipated that it will eventually match or surpass Engineering in terms of the number of papers, although engineering typically contains more papers. Furthermore, the increase in Business, Management, and Accounting indicates an expansion of the use of AI and KM in these fields.

Table 2. The number of subject-specific articles published between 2012 and 2022.

Field	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Engineering	-	-	1	-	-	-	-	3	1	1	4
Computer Science	-	-	-	-	-	-	-	1	-	2	6
Business, Management, and Accounting	-	-	-	-	-	-	-	3	3	1	3
Mathematics	-	-	-	-	-	-	-	2	-	1	2
Physics and Astronomy	-	-	-	-	-	-	-	-	2	2	3
Chemical Engineering	-	-	1	-	-	-	-	-	-	-	2
Social Sciences	-	-	-	-	-	1	-	-	-	1	1
Materials Science	-	-	-	-	-	-	-	-	-	-	2
Biochemistry, Genetics, and Molecular Biology	-	-	1	-	-	-	-	-	-	-	-
Decision Sciences	-	-	-	-	-	-	-	-	-	-	1
Earth and Planetary Sciences	-	-	-	-	-	1	-	-	-	-	-
Economics, Econometrics, and Finance	-	-	-	-	-	-	-	-	-	1	-

Figure 3 shows the annual number of articles released from 2012 to 2022. The only documents accessible from 2012 to 2018 were the two in 2014 and the two in 2018. The following information demonstrates how publication dates have evolved throughout time: five articles (21%) were published in 2019, four articles (17%) in 2020, two articles (8.3%) in 2021, and eleven articles (46%) in 2022. It is noteworthy that in the field of KM and AI research, particularly in 2022, a considerable surge occurred. The highest number of published studies in this field occurred in 2022. In addition, there was a steady rise in the number of publications published on the role of AI in KM during the last three years, from 2012 to 2022. Over the years, adjustments were made to KM and the workplace. The importance of information technology in KM has grown over the past few years. As a system's ability to use the knowledge acquired to achieve specific tasks and goals through flexible adaptation, AI has made significant scientific progress over the past ten years [43].

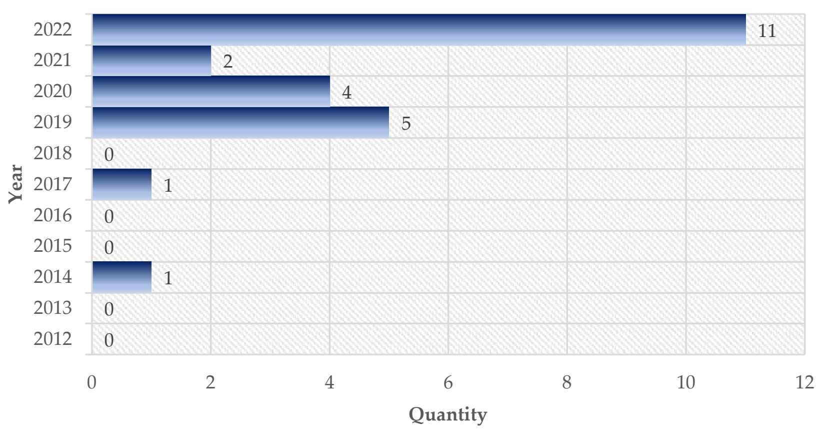

Figure 3. Annual publishing numbers, from 2012 until 2022.

Figure 4 illustrates the cloud words generated from the connection between the keywords of the publications chosen for the critical literature study. The review found that the phrases artificial intelligence, knowledge management, machine learning, and knowledge acquisition were the most frequently used. The rapid advancement of AI, especially in the application of machine learning in KM, can help organizations to optimize the KM systems needed by businesses [44]. Machine learning can help in the acquisition of complex data and the delivery of the critical solutions hidden within these assets [45].

Figure 4. Key terms in articles (created by www.wordclouds.com, 10 January 2023).

Figure 5 depicts the percentage of writers by nationality. China (five authors) and Belgium (four authors) were the two nations with the most authors. Demographics can be an important component in this area.

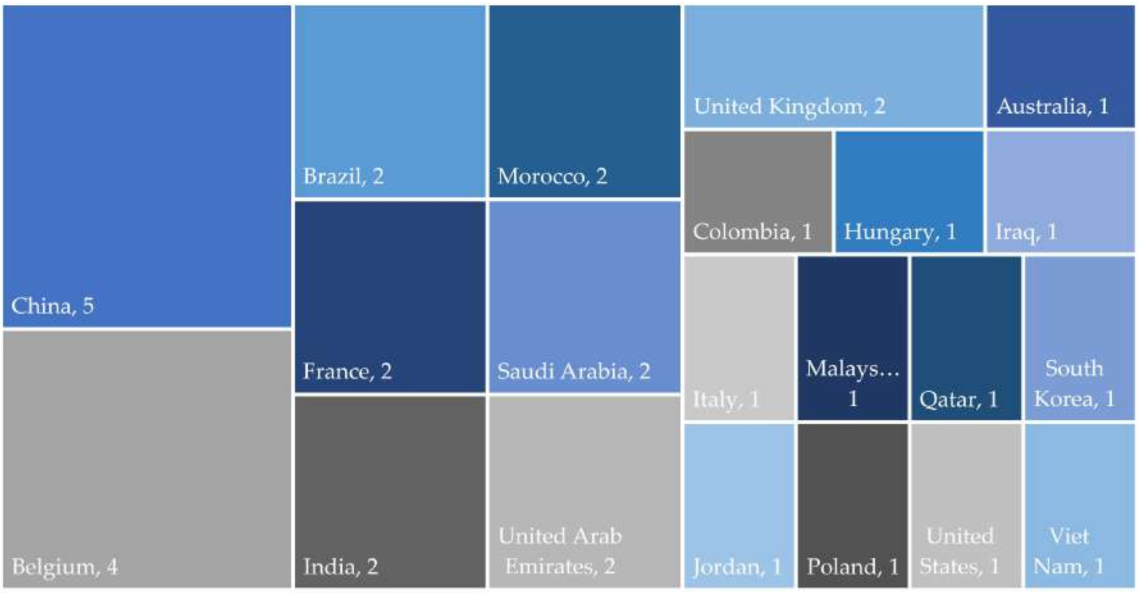

Figure 5. The distribution of authors in each country.

Table 3 presents the ten most frequently cited publications from 2012 to 2022. There is also a need for research to extend the capabilities of AI in the field of KM. Artificial Intelligence and KM are similar areas, since they are both deeply tied to knowledge; the distinction is in how—while AI provides computers with the capacity to learn, KM provides a platform through which to better comprehend information.

Table 3. Articles with the most citations (2012–2022).

Goal	Year	Cited	Reference
An analytical approach for integrating AI, customer relationship management, and KM to enhance business operations	2020	44	[46]
Putting the tacit dimension of AI and KM to the test	2017	32	[18]
A KM perspective on autonomous wireless systems using AI	2019	29	[47]
Material structure feature engineering for AI-based materials knowledge systems	2020	19	[48]
E-health AI implementation: A case study of epidemiological data management dashboard in Poland	2014	18	[49]
The contribution of KM to improving AI algorithms and systems	2020	12	[50]
A method using AI to aid in KM for the selection of innovation and creativity strategies.	2020	11	[51]
AI-employee cooperation and enterprise performance: integrating an organizational socialization framework, socio-technical systems, and knowledge-based perspective	2022	10	[52]
KM using AI for self-deployment of non-stationary wireless systems	2019	10	[53]
A knowledge-based AI system to aid in sales decision-making	2019	10	[54]

4.3. Developments in Different Applications

Artificial Intelligence is a powerful tool that supports knowledge in all areas. This partnership aids the KMP because AI is constantly improving with new technology. Knowledge is the key to both KM and AI. As a result, the efficiency that AI can provide to enterprises acts as a tool for accessibility for their requirements. Only via scientific theory, knowledge principles, and processes is it possible to comprehend the advantages and disadvantages of KM and AI. Understanding power relations is crucial to understanding how AI and KM interact, since individuals continuously debate their identities, rules, and futures while using AI and KM to further their own or other people's oppressive or oppositional initiatives [55].

There have been research studies on AI and KM, but few have been conducted on how the two might be combined to improve businesses, organizations, wireless systems, healthcare, tutorial, and innovations (Figure 6). The study by Alghanem et al. [50] illustrates the relationship between KM practices and AI systems from a higher perspective, offering various options for applying other KM practices to the same AI algorithm to mitigate implementation issues and increase adoption. The research's key result was the significant influence that certain KM activities, such as knowledge production and acquisition, had on various AI systems and algorithms, providing businesses with alternative implementation options. Additionally, the study reveals that the majority of studies concur that role-playing may improve AI algorithms and systems and that KM techniques have the same effect. The work by Sanzogni et al. [18] studies how AI can contribute to the KM discussion. To advance the knowledge discussion, it investigates the function of tacit knowledge and the theoretical boundaries of KM and AI. Expert knowledge can only be obtained by experience, since it combines collective tacit knowledge, somatic tacit knowledge, and relational tacit information (i.e., on-the-job learning). It is important to examine how people and AI-based technology interact while carrying out KM-related activities. This research expands upon previous works in the field by providing a more comprehensive picture of how AI has been used to improve the quality of KM.

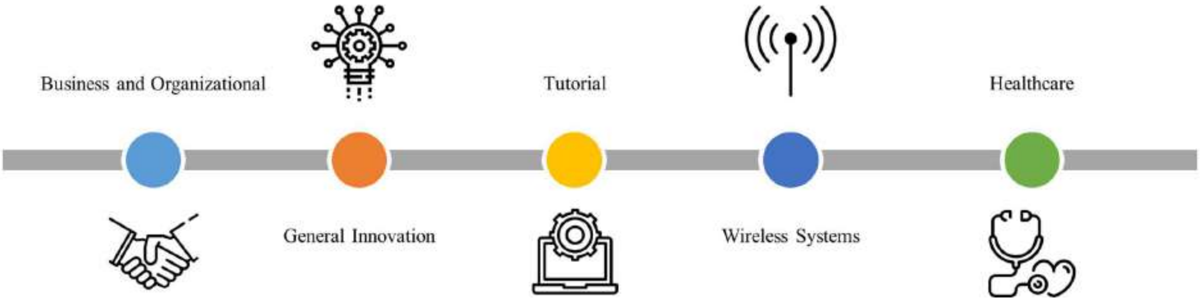

Figure 6. General applications of AI and KM in studied articles.

The amount and appropriateness of the data obtained have a direct impact on the quality of the decisions made; thus, at this point, AI techniques may be of great assistance. They may be used, for example, by a company operating in a certain economic environment to specify the information required for attaining strategic objectives and to deliver it via the knowledge-production process. The conversion of enormous volumes of data into useful information that may be utilized proactively in decision-making is a difficult task. Data gathering and analysis help managers to make logical strategic choices. Through synergies and information-processing skills, information-technology-supported KM facilitates the creation and use of operational efficiency and innovative capacities [56].

4.3.1. Business and Organizational

The literature currently in print describes the relevance of collaborative intelligence, which results from an efficient collaboration between human employees and AI systems to produce outcomes that are important to organizations. On the elements impacting the AI–human relationship and its effect on company success, there is, nevertheless, a dearth of research findings. To close this knowledge gap, Chowdhury et al. [52] created and verified a unique theoretical model focusing on how knowledge sharing, trust, workers' AI abilities, and job clarity relate to better business success. The model draws on the socio-technical systems (STS), knowledge-based view (KBV), and organizational socialization framework (OSF). With the aid of these discoveries, managers and the AI community will be able to establish collaborative intelligence capabilities inside their organizations.

The aim of the article by Chatterjee et al. [46] is to pinpoint the key success factors (CSFs) for an AI-integrated customer-relationship-management system that would enhance KM in enterprises and boost operational efficiency. The suggested interpretive structural model serves as a thorough and efficient roadmap for enhancing performance when using AI-customer-relationship management to support KM environments. The findings indicate that senior-management backing is necessary for the effective implementation of AI-integrated customer-relationship-management systems to improve KM and, consequently, to enhance company processes. The goal of the paper by Baierle et al. [54] was to discuss the creation of a knowledge-based system that, with the help of rules, may assist the decision-making procedures of a company's sales department. By using the knowledge-based system, the decision-making process may be made more reliable and flexible, and it is also feasible to model probable future business scenarios. All of the study's factors are significant to the decision-making process in some way, and they need to be examined collectively to produce a trustworthy conclusion; otherwise, a poor choice may be made, which would harm how the implementation of the company's plan. The major contribution of Baierle et al.'s case study is its revelation of how a knowledge-based system helped a firm in the south of Brazil's sales sector to discover a suitable solution to a business issue. The goal of Bencsik's [56] theoretical research was to create a framework that, beginning with the business model and using the synergy of KM and AI, outlines a way to predict the success of future innovations while ensuring the strategy's viability through the use of appropriate managerial decisions. The study's output is a model for anticipating successful innovation that, when used in the knowledge-creation stage of KM with AI assistance, offers the foundation for making the best managerial choices to ensure the attainment of strategic objectives. The model's actual implementation in business operations encourages managerial foresight and judgments concerning innovative investments that have an impact on organizational performance.

The goal of the study by Leoni et al. [57] is to provide and empirically test a conceptual model in which supply-chain resilience, KMPs, and AI are all taken into account simultaneously in terms of their reciprocal relationships and effects on manufacturing firms' performance. This research shows that KMPs need to be carefully considered as a mediating mechanism for manufacturing enterprises interested in correctly using AI to improve their performance and resilience. The work by Alshadoodee et al. [58] demonstrates how KM-based administrative-decision-support systems may be improved using AI. The administration of a private college is used in the research as a variable on which the findings are dependent. Most methods for managing business activities that advance organization and administration delivery have been improved by technological advances. Businesses in this sector need to gradually move into the digitization of all industrial cycles, and business processes connected to administration; increasingly, the same can be said of crucial services in educational institutions. The knowledge required to form the basis of an efficient and effective educational system still features significant limitations due to the requirement for competent decision-making assistance utilizing KM for good governance and to enhance the reputation of particular institutions.

4.3.2. General Innovation

To increase the expansion of awareness of the digitalization of the construction sector, organizational structures and business establishments need to build creative and problem-solving procedures. The work by Botega and da Silva [51] aims to demonstrate a creative support system capable of handling this volume of data and offering insights to enhance the development of new products. The validation procedure confirms the applicability of the strategy and suggests improvements for further advances. This knowledge-based system may be useful in teaching Design and Engineering students about crucial facets of creativity and the selection process for approaches, as well as in real-world-application situations and exchanging information on creative and innovative techniques. An AI-based KM fuzzy-assessment-algorithm-evaluation model was used in the research by Liu and Zhang [59] to assess the innovative KM of 16 universities. During the process of establishing the model, the network architecture, activation function, learning parameters, and neural network algorithm were determined. The model was trained and validated using learning-sample data. The findings of the assessment indicated that the suggested model for evaluating universities' innovative knowledge, based on the fuzzy algorithm and the AI algorithm, is operable, scientific, and applicable. The results were in line with the year's real assessment findings, which illustrates the fuzziness of university innovations in KM, according to fuzzy AI, which was used to evaluate the algorithm. The results demonstrate the viability of the evaluative approach. The study by Bokhari and Myeong [60] aims to use KM-based service-science theory and the diffusion-of-innovation theory to examine the quantitative link between smart-city performance, innovation, e-governance, and technology-oriented KM. The study revealed that the direct links are contextual because innovation mediates the relationship between e-service delivery and KM, and e-governance mediates the relationship between e-service delivery and innovation.

Liu [61]'s work investigates the most significant effects of AI on the management of knowledge innovation and the most influential variables in this process. The findings demonstrate that AI had a substantial effect on the dynamic components, capacity elements, environmental elements, and stock management of information flow. Artificial Intelligence has endogenous effects on improvements in the flow of knowledge and network diffusion. Artificial Intelligence technology fostered the construction of unique technical innovations and had a clear automatic-recognition function in new knowledge, which stimulated the principal internal transmission power of innovation in knowledge. Moreover, AI activated the energy level of original invention and progressive technological advancements, which were mostly derived from the innovation system's profound flowing knowledge. The deep-runoff-knowledge-transfer efficiency and retention rate were modified by the knowledge network. The penetration rate of AI influenced the intelligent industry's scope for collaboration and the application of integrated knowledge. The goal of the study by Arias-Pérez and Cepeda-Cardona [62] is to examine the moderating impact of the technological upheaval created by AI on the interaction between classic KM techniques of personalizing codification (explicit knowledge) and tacit knowledge, as well as organizational improvisation, which refers to a firm's capacity to generate ideas and react to changes in the technological environment in real-time. Codification and customization both have a considerably positive impact on improvisation; the effect of the former is stronger than that of the latter. The association between personalization and improvisation, however, is weaker when technological upheaval created by AI occurs, but the tie between codification and improvisation is stronger.

4.3.3. Tutorial

Artificial Intelligence may boost the knowledge of employees through reskilling and upskilling, for example. Organizations may use this information to offer targeted development and training as AI systems become more aware of human talents and actions. The paper by Bilquise and Shaalan [63] examines the problems with the current advisory system from the viewpoint of KM and suggests an integrated AI-based framework to deal with primary advising duties. The study proposes three AI-based systems to improve the current advisory process: a rule-based expert system that recommends courses and generates study plans for the upcoming semester; an early machine-learning-based system for the detection of students at risk of failing a course; and conversational AI chatbots to offer students individualized digital support. All three systems work together to provide advisors and students with individualized help and direction using the information in the current information system. The tutorial by Kalidindi [48] covers the basic ideas that support the newly developed AI-based materials knowledge system (AI–MKS) architecture methodically. To capture the process–structure–property linkages across a hierarchy of material structure/length scales, these approaches focus on feature-engineering the internal structure of heterogeneous materials to generate low-dimension representations, which may be combined with machine-learning models to construct low-computational-cost surrogate models. This framework, known as materials knowledge systems (MKS), successfully merges current AI/machine-learning toolsets with the current experimental and physics-based simulation toolsets utilized by domain experts in the materials business. The tutorial's main objective is to lay the groundwork for domain experts to comprehend and seize the opportunities that will result from the synergistic integration of AI/machine-learning technologies into ongoing efforts to create new materials, while also outlining a clear course of action for achieving this objective.

Through the mediating impact of the learning environment in the Saudi Arabian service industry, Baslom and Tong [64]'s research sought to investigate the empirical link between awareness of AI and the strategic management of organizational knowledge. The data from the targeted respondents were gathered using both questionnaire and interview methodologies, and a structured questionnaire was produced for better comprehension. The results of the factor analysis show that all the indicators of the learning environment, strategic KM, and awareness of AI had excellent factor loadings. The results from a structural equation model of the strategic management of information and awareness of AI show that knowledge distribution, knowledge acquisition, and knowledge responsiveness all significantly and favorably influence AI awareness. The association between AI and knowledge acquisition, as well as the relationship between information dissemination and AI, are both considerably mediated by the learning climate (LC), according to research on the mediating influence of the LC. However, the LC's role as a mediator between knowledge responsiveness and AI is minimal. Yang et al. [65] suggested an intelligent-knowledge-based recommender system (IKRS) for smart education utilizing AI. The suggestions were created via the evolutionary algorithm and the K-nearest neighbor algorithm (KNN) by applying the optimal weights to attribute vectors that reflect the learner's viewpoints. The experimental results showed that the suggested IKRS model improves learning quality, student engagement levels, and student–teacher interactions, and predicts students' learning styles when compared to other existing methodologies. Based on their findings, Sun and Gu [66] conclude that a knowledge graph for AI-assisted smart education has the potential to bring together the subject-matter expertise of discipline experts and teaching experience, enhance the machine's ability to communicate with humans, and provide knowledge-driven and data-driven information-processing techniques.

4.3.4. Wireless Systems

Artificial Intelligence may be used to improve a wide range of wireless-technology capabilities. Gacanin [47] provides a vision for knowledge-driven wireless operations using AI techniques, including active learning, KM, reasoning, and sense. The purpose of combining KM with active learning, reasoning, and sense is to give readers inspiration, as well as a huge general data-independent AI approach for autonomous agents in the context of real-time self-organization. In another study, Gacanin et al. [53] provide a brand-new idea for a KM framework to allow self-learning and self-optimization for real-time wireless-system operation. An AI-based self-deployment framework was tested in several indoor situations, including residential and business settings with dense deployments of nearby access points that caused interference and contention, using the testbed and standard compliance simulator, ns-3. The agent gained sufficient information from previous activities, enhancing the caliber of judgments made in the future. The agent was given domain knowledge to use as a guide while discovering and taking advantage of a range of potential behaviors in the environment. To deal with the non-deterministic polynomial-time hardness problem of combining channel and location optimization in a wireless system, the agent ensures that learning is low-cost and creates a network setup that is close to optimal. For non-stationary wireless extenders, Gacanin et al. [67] provide a self-deployment technique in which both back-haul and front-haul connections are optimized. Intelligent Channel Assignment and Location Optimization (ICALO) is a self-optimization approach for wireless extenders in wireless-mesh networks that use a learning framework powered by AI. The ICALO method optimizes the operating channels and locations of extenders by achieving a balance between their back-haul and front-haul performance while taking into account the influence of uncoordinated adjacent networks, learning cost, and network dynamics. Gacanin et al.'s findings demonstrate considerable throughput increases through a variety of different channel-assignment techniques, as well as a considerably quicker convergence to peak performance, with fewer actions than unguided reinforcement learning. The authors offer a case-based reasoning framework for AI that allows self-deployment with environment learning via sensing and perception. By balancing the exploration and exploitation of the search space, problem-specific optimization and semi-supervised learning generate new actions or extender positions.

4.3.5. Healthcare

Knowledge management is essential to the healthcare industry because it fosters improved practitioner cooperation and enhances patient outcomes. To reduce the strain on healthcare workers and, eventually, save them money, AI can automate certain operations. A healthcare KM system is presented by Phan et al. [68] to enable the systematic generation of knowledge on varied data in hospitals. The outcomes of their research show that the system ensures the knowledge-generation process, allowing knowledge exploitation and exploration to improve healthcare-decision making. The knowledge system was used for the identification and categorization of cerebral bleeding and high blood pressure in text and CT/MRI image formats, respectively, using hospital medical data. It may assist physicians in correctly diagnosing ailments so they can provide effective treatment plans. The purpose of Ziuzianski et al. [49]'s study was to outline the dashboard implementation technique in e-health KM and to illustrate the current status of e-health AI systems. Performance dashboards link data sources and show data to enable quicker and more precise decision-making. According to their dashboard project using epidemiological data in Poland, Ziuzanski et al. described the various epidemiological data sources and presented a case study. As shown by the examples given by the authors, the use of these kinds of systems in e-health has considerably increased in recent years. Given the gaps in healthcare systems shown by the COVID-19 pandemic, Nasseef et al. [69] explored the consequences of using an AI-driven public-healthcare framework to enhance decision-making concerning the effect of government-to-government (G2G) interactions. The issue representation in Knowledge-based Exchange on AI-based COVID-19 Diagnosis (AI-D) demonstrates how the solver was cognitively active in processing knowledge about the target problem while using an AI-based COVID-19 task solution. The solver's present comprehension of the issue's substance is closely tied to this representation as a consequence of the external AI-based COVID-19 problem representations.

Table 4 provides a summary of the papers reviewed in this study, listed from top to bottom by citation. This is based on the papers' areas of focus, including general innovation, healthcare, businesses and organizations, wireless systems, and tutorials. Artificial Intelligence has already made a significant contribution to the excellence and effectiveness of KM in terms of thinking and problem-solving methods, as well as through optimization systems, scheduling, decision-support systems, planning, intelligent tutors, modeling and processing, and knowledge acquisition, as evidenced by the aforementioned examples [70].

Table 4. An overview of main applications in the articles included in this review.

Citation	General Innovation	Healthcare	Business and Organizational	Wireless Systems	Tutorial	Source
44			✓			[46]
32	✓					[18]
29				✓		[47]
19					✓	[48]
18		✓				[49]
12	✓					[50]
11	✓					[51]
10			✓			[52]
10				✓		[53]
10			✓			[54]
6		✓				[69]
6	✓					[56]
4		✓				[68]
3					✓	[66]
3				✓		[67]
2			✓			[62]
1	✓					[60]
1					✓	[65]
1	✓					[59]
1					✓	[64]
0			✓			[58]
0			✓			[57]
0					✓	[63]
0	✓					[61]

4.4. Future Directions

As mentioned in the literature, KMP is crucial to the success of firms, since it ultimately leads to a competitive advantage. The integration KM with machine learning and natural language algorithms connected to AI technology is quite beneficial. This may facilitate corporate operations and save expenses. It is recommended that the public sector implement this technology to minimize the time required for assigning and recording customer-service data.

The digital age is the fourth industrial revolution to affect the construction sector. Building-information modeling, virtual reality, unmanned aerial vehicles, and AI are employed and integrated into the industry's daily responsibilities to facilitate more efficient operations. Knowledge management originated during the early and mid-1990s, as a corporate technique to increase productivity and quality. After decades of study on KM, it was found that the research on AI and KM complement one another in terms of generating better procedures to facilitate better KM.

The use of knowledge management as a business strategy offers firms a competitive advantage that enables them to outperform their rivals. The successful use of KM can enhance revenues, reduce resource exploitation, boost savings, and provide a noticeable increase in user acceptance [71]. Knowledge management supports the formation of an atmosphere conducive to education and learning, both of which are considered advantages to businesses, since workers are encouraged continue their education, acquire new skills, and assume leadership positions, and are often rewarded as a result. To become more competitive, organizations need to make fundamental adjustments to their strategic plans to better meet the needs of local markets. When implemented into a strategic configuration, KM facilitates the comprehension of local environments by discriminating between diverse institutions, entity demands, and consumer preferences [72]. Today's global economies are changing at an unprecedented rate. In this changing environment, whether on a local or global scale, firms want personnel who are precisely taught to detect critical information and expertise. Consequently, businesses may increase their production via the strategic use of KM [56]. The patterns found in the study by Cantu-Ortiz et al. [73] indicate that autonomous systems and other AI technologies, including robotics, computer vision, voice recognition, IoT, and other related fields, have little interaction with KM at present, but have high potential to fertilize KM, particularly in the period covering 2026–2030, after an incubation period spanning 2020–2025.

The availability of authorized data is one of the major issues facing the present AI sector. Internet systems with decentralized, publicly accessible databases offer the ability to solve this problem. The analysis and processing of the data inherited by blockchain led to the creation of a priceless body of knowledge and the monetization of blockchain information for both enterprises and AI developers. Many opportunities exist to put this information to use in the real world to produce innovations in or revolutionize business models, including infrastructure for electric vehicles, intelligent autonomous supply chains, smart homes, smart cities, decentralized banking, and the exchange of commodities [74].

Despite the lack of acceptance of AI and effective KM tools, the digitization of the construction sector has led to the use of AI tools. This demonstrates that AI will soon be utilized to support KM across sectors; nevertheless, there are greater applications for AI in the context of KM that may have a significant effect and help organizations and enterprises. Recent research reveals that the great majority of AI expenditures have little to no effect [75]. Decades of studies suggest that organizational changes need to accompany IT deployment for the latter to be effective. These are called organizational supplements [76].

5. Conclusions

Knowledge management is the process of creating, using, sharing, and managing an organization's information and knowledge. Traditional KM has evolved over the years, but documentation has always served as its base. Nonetheless, the considerable shift toward remote and hybrid labor has shown deficiencies in present practices. These voids will be filled by AI, which will also affect how KM is converted and operated. Although AI has been implemented by few businesses because of the initial investment required, firms hesitate because they are unaware of the full advantages of AI and how it may improve KM inside teams. To determine the difference between business processes without AI for KM and those that use AI to aid KM, it is necessary to conduct a study of the use of AI to benefit KM across various industries. This article examines research published between 2012 and 2022 on AI and KM, with a focus on how AI may assist enterprises in their efforts to properly manage knowledge and information. Based on the findings of this study, KM has been intensively studied over the years, but there is still much to learn and no single approach can be stated to be the best for managing knowledge inside organizations or companies. Recent years have seen a rise in industry interest in AI, as the construction industry has entered its fourth industrial revolution and becomes more digitized. Most organizations in the construction sector have been hesitant to implement AI because it requires a substantial initial investment, including the hiring of personnel who are capable of interacting with the machines. Moreover, these businesses have struggled to adopt efficient KM systems. Accordingly, the number of works on AI and KM is increasing in various areas, such as engineering, computer science, business, management, etc.

This study reviewed how the combination of AI and KM could enhance innovations, wireless networks, education, healthcare, businesses, and organizations. The results of numerous studies demonstrate that AI has already greatly improved the quality and effectiveness of KM with regard to knowledge acquisition, problem-solving strategies, knowledgeable tutors, optimal solution systems, organization, modeling, etc. However, there are more advanced potential applications for AI in the context of KM, which may have a significant impact and aid groups and enterprises. Artificial Intelligence will soon be used as a support for KM across sectors. To improve the uses and efficacy of these fields, more research is required in the future. Blockchain may be able to solve the aforementioned problems and enhance KM. As the organizations' knowledge capacity improves, the problem of knowledge storage may be solved and the sharing of knowledge may be improved. This could serve as a beneficial research topic for further study.

Author Contributions: Conceptualization, H.T.; methodology, H.T.; validation, H.T.; formal analysis, H.T. and M.M.; resources, H.T. and M.M.; data curation, H.T.; writing—original draft preparation, M.M. and H.T.; writing—review and editing, M.M.; visualization, H.T. and M.M.; supervision, H.T. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: Data sharing not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Salloum, S.A.; Alhamad, A.Q.M.; Al-Emran, M.; Monem, A.A.; Shaalan, K. Exploring Students' Acceptance of E-Learning Through the Development of a Comprehensive Technology Acceptance Model. *IEEE Access* **2019**, *7*, 128445–128462. [CrossRef]
2. Salloum, S.A.; Shaalan, K. Adoption of e-book for university students. In *International Conference on Advanced Intelligent Systems and Informatics*; Springer: Berlin/Heidelberg, Germany, 2018.
3. Cooke, P.; Leydesdorff, L. Regional Development in the Knowledge-Based Economy: The Construction of Advantage. *J. Technol. Transf.* **2006**, *31*, 5–15. [CrossRef]
4. Lee, C.; Lee, G.; Lin, H. The role of organizational capabilities in successful e-business implementation. *Bus. Process. Manag. J.* **2007**, *13*, 677–693. [CrossRef]
5. Liebowitz, J. Knowledge management and its link to artificial intelligence. *Expert Syst. Appl.* **2001**, *20*, 1–6. [CrossRef]
6. Lee, J.-C.; Shiue, Y.-C.; Chen, C.-Y. Examining the impacts of organizational culture and top management support of knowledge sharing on the success of software process improvement. *Comput. Hum. Behav.* **2016**, *54*, 462–474. [CrossRef]
7. Metaxiotis, K.; Ergazakis, K.; Samouilidis, E.; Psarras, J. Decision support through knowledge management: The role of the artificial intelligence. *Inf. Manag. Comput. Secur.* **2003**, *11*, 216–221. [CrossRef]
8. Alhashmi, S.F.S.; Salloum, S.A.; Abdallah, S. Critical success factors for implementing artificial intelligence (AI) projects in Dubai Government United Arab Emirates (UAE) health sector: Applying the extended technology acceptance model (TAM). In *International Conference on Advanced Intelligent Systems and Informatics*; Springer: Berlin/Heidelberg, Germany, 2019.

9. Salloum, S.A.; Al-Emran, M.; Shaalan, K. The impact of knowledge sharing on information systems: A review. In *International conference on knowledge Management in Organizations*; Springer: Berlin/Heidelberg, Germany, 2018.
10. Santoro, G.; Vrontis, D.; Thrassou, A.; Dezi, L. The Internet of Things: Building a knowledge management system for open innovation and knowledge management capacity. *Technol. Forecast. Soc. Change* **2018**, *136*, 347–354. [CrossRef]
11. Al-Emran, M.; Mezhuyev, V.; Kamaludin, A.; Shaalan, K. The impact of knowledge management processes on information systems: A systematic review. *Int. J. Inf. Manag.* **2018**, *43*, 173–187. [CrossRef]
12. Al-Emran, M.; Teo, T. Do knowledge acquisition and knowledge sharing really affect e-learning adoption? An empirical study. *Educ. Inf. Technol.* **2020**, *25*, 1983–1998. [CrossRef]
13. Al-Emran, M.; Mezhuyev, V.; Kamaludin, A. An innovative approach of applying knowledge management in M-learning application development: A pilot study. *Int. J. Inf. Commun. Technol. Educ.* **2019**, *15*, 94–112. [CrossRef]
14. Brynjolfsson, E.; Mitchell, T. What can machine learning do? Workforce implications. *Science* **2017**, *358*, 1530–1534. [CrossRef] [PubMed]
15. Pereira, T.; Santos, H. The Matrix of Quality Dimensions of Knowledge Management: Knowledge Management Assessment Models Review. *Knowl. Manag. Int. J.* **2013**, *12*, 33–41. [CrossRef]
16. Liebowitz, J. Knowledge management receptivity at a major pharmaceutical company. *J. Knowl. Manag.* **2000**, *4*, 252–258. [CrossRef]
17. Wu, L.; Hu, Y.-P. Open innovation based knowledge management implementation: A mediating role of knowledge management design. *J. Knowl. Manag.* **2018**, *8*, 1736–1756. [CrossRef]
18. Sanzogni, L.; Guzman, G.; Busch, P. Artificial intelligence and knowledge management: Questioning the tacit dimension. *Prometheus* **2017**, *35*, 37–56. [CrossRef]
19. Chen, Z.; Liu, B. Lifelong machine learning. *Synth. Lect. Artif. Intell. Mach. Learn.* **2018**, *12*, 1–207.
20. Taherdoost, H. Machine Learning Algorithms: Features and Applications. In *Encyclopedia of Data Science and Machine Learning*; IGI Global: Hershey, PA, USA, 2023; pp. 938–960.
21. Lei, Z.; Wang, L. Construction of organisational system of enterprise knowledge management networking module based on artificial intelligence. *Knowl. Manag. Res. Pract.* **2020**, 1–13. [CrossRef]
22. Qi, G.; Zhu, Z. Blockchain and Artificial Intelligence Applications. *J. Artif. Intell. Technol.* **2021**, *1*, 83. [CrossRef]
23. Taherdoost, H. Blockchain Technology and Artificial Intelligence Together: A Critical Review on Applications. *Appl. Sci.* **2022**, *12*, 12948. [CrossRef]
24. van Zelst, S.J.; van Dongen, B.F.; van der Aalst, W.M. Event stream-based process discovery using abstract representations. *Knowl. Inf. Syst.* **2018**, *54*, 407–435. [CrossRef]
25. Bughin, J.; Hazan, E.; Ramaswamy, S.; Chui, M.; Allas, T.; Dahlstrom, P.; Henke, N.; Trench, M. Artificial Intelligence: The Next Digital Frontier? McKinsey Global Institute: New York, NY, USA, 2017.
26. Townsend, D.M.; Hunt, R.A.; McMullen, J.S.; Sarasvathy, S.D. Uncertainty, knowledge problems, and entrepreneurial action. *Acad. Manag. Ann.* **2018**, *12*, 659–687. [CrossRef]
27. Soto-Acosta, P.; Popa, S.; Palacios-Marqués, D. E-business, organizational innovation and firm performance in manufacturing SMEs: An empirical study in Spain. *Technol. Econ. Dev. Econ.* **2016**, *22*, 885–904. [CrossRef]
28. Nickerson, J.A.; Zenger, T.R. A Knowledge-Based Theory of the Firm—The Problem-Solving Perspective. *Organ. Sci.* **2004**, *15*, 617–632. [CrossRef]
29. Tsang, E.W.; Zahra, S.A. Organizational unlearning. *Hum. Relations* **2008**, *61*, 1435–1462. [CrossRef]
30. Suresh, S.; Olayinka, R.; Chinyo, E.; Renukappa, S. Impact of knowledge management on construction projects. *Proc. Inst. Civ. Eng. Manag. Procure. Law* **2016**, *170*, 27–43. [CrossRef]
31. Alani, E.; Kamarudin, S.; Alrubaiee, L.; Tavakoli, R. A model of the relationship between strategic orientation and product innovation under the mediating effect of customer knowledge management. *J. Int. Stud.* **2019**, *12*, 232–242. [CrossRef]
32. Haenlein, M.; Kaplan, A. A Brief History of Artificial Intelligence: On the Past, Present, and Future of Artificial Intelligence. *Calif. Manag. Rev.* **2019**, *61*, 5–14. [CrossRef]
33. Taherdoost, H.; Madanchian, M. Artificial Intelligence and Sentiment Analysis: A Review in Competitive Research. *Computers* **2023**, *12*, 37. [CrossRef]
34. Ertel, W. *Introduction to Artificial Intelligence*; Springer: Berlin/Heidelberg, Germany, 2018.
35. Kumar, V.; Rajan, B.; Venkatesan, R.; Lecinski, J. Understanding the Role of Artificial Intelligence in Personalized Engagement Marketing. *Calif. Manag. Rev.* **2019**, *61*, 135–155. [CrossRef]
36. Jarrahi, M.H. Artificial intelligence and the future of work: Human-AI symbiosis in organizational decision making. *Bus. Horizons* **2018**, *61*, 577–586. [CrossRef]
37. Yano, K. How artificial intelligence will change HR. *People Strategy* **2017**, *40*, 42–47.
38. Taherdoost, H. Towards Nuts and Bolts of Conducting Literature Review: A Typology of Literature Review. *Electronics* **2023**, *12*, 800. [CrossRef]
39. Snyder, H. Literature review as a research methodology: An overview and guidelines. *J. Bus. Res.* **2019**, *104*, 333–339. [CrossRef]
40. Wang, H.; Xu, Z.; Fujita, H.; Liu, S. Towards felicitous decision making: An overview on challenges and trends of Big Data. *Inf. Sci.* **2016**, *367–368*, 747–765. [CrossRef]

41. Serenko, A.; Dumay, J. Citation classics published in knowledge management journals. Part I: Articles and their characteristics. *J. Knowl. Manag.* **2015**, *19*, 401–431. [CrossRef]
42. Inkinen, H.T.; Kianto, A.; Vanhala, M. Knowledge management practices and innovation performance in Finland. *Balt. J. Manag.* **2015**, *10*, 432–455. [CrossRef]
43. Perifanis, N.-A.; Kitsios, F. Investigating the Influence of Artificial Intelligence on Business Value in the Digital Era of Strategy: A Literature Review. *Information* **2023**, *14*, 85. [CrossRef]
44. Nyame, G.; Qin, Z.; Obour Agyekum, K.O.-B.; Sifah, E.B. An ECDSA Approach to Access Control in Knowledge Management Systems Using Blockchain. *Information* **2020**, *11*, 111. [CrossRef]
45. Kolisetty, V.; Rajput, D. A Review on the Significance of Machine Learning for Data Analysis in Big Data. *Jordanian J. Comput. Inf. Technol.* **2020**, *6*, 155–171. [CrossRef]
46. Chatterjee, S.; Ghosh, S.K.; Chaudhuri, R. Knowledge management in improving business process: An interpretative framework for successful implementation of AI–CRM–KM system in organizations. *Bus. Process. Manag. J.* **2020**, *26*, 1261–1281. [CrossRef]
47. Gacanin, H. Autonomous Wireless Systems with Artificial Intelligence: A Knowledge Management Perspective. *IEEE Veh. Technol. Mag.* **2019**, *14*, 51–59. [CrossRef]
48. Kalidindi, S.R. Feature engineering of material structure for AI-based materials knowledge systems. *J. Appl. Phys.* **2020**, *128*, 041103. [CrossRef]
49. Ziuzianski, P.; Furmankiewicz, M.; Soltysik-Piorunkiewicz, A. E-health artificial intelligence system implementation: Case study of knowledge management dashboard of epidemiological data in Poland. *Int. J. Biol. Biomed. Eng.* **2014**, *8*, 164–171.
50. AlGhanem, H.; Shanaa, M.; Salloum, S.; Shaalan, K. The Role of KM in Enhancing AI Algorithms and Systems. *Adv. Sci. Technol. Eng. Syst. J.* **2020**, *5*, 388–396. [CrossRef]
51. Botega, L.F.C.; da Silva, J.C. An artificial intelligence approach to support knowledge management on the selection of creativity and innovation techniques. *J. Knowl. Manag.* **2020**, *24*, 1107–1130. [CrossRef]
52. Chowdhury, S.; Budhwar, P.; Dey, P.K.; Joel-Edgar, S.; Abadie, A. AI-employee collaboration and business performance: Integrating knowledge-based view, socio-technical systems and organisational socialisation framework. *J. Bus. Res.* **2022**, *144*, 31–49. [CrossRef]
53. Gacanin, H.; Perenda, E.; Atawia, R. Self-Deployment of Non-Stationary Wireless Systems by Knowledge Management with Artificial Intelligence. *IEEE Trans. Cogn. Commun. Netw.* **2019**, *5*, 1004–1018. [CrossRef]
54. Baierle, I.C.; Sellitto, M.A.; Frozza, R.; Schaefer, J.L.; Habekost, A.F. An Artificial Intelligence and Knowledge-Based System to Support the Decision- Making Process in Sales. *South Afr. J. Ind. Eng.* **2019**, *30*, 17–25. [CrossRef]
55. Courpasson, D.; Golsorkhi, D.; Sallaz, J.J. *Rethinking Power in Organizations, Institutions, and Markets: Classical Perspectives, Current Research, and the Future Agenda*; Emerald Group Publishing Limited: Bingley, UK, 2012.
56. Bencsik, A. The sixth generation of knowledge management–the headway of artificial intelligence. *J. Int. Stud.* **2021**, *14*, 84–101. [CrossRef]
57. Leoni, L.; Ardolino, M.; El Baz, J.; Gueli, G.; Bacchetti, A. The mediating role of knowledge management processes in the effective use of artificial intelligence in manufacturing firms. *Int. J. Oper. Prod. Manag.* **2022**, *42*, 411–437. [CrossRef]
58. Alshadoodee, H.A.A.; Mansoor, M.S.G.; Kuba, H.K.; Gheni, H.M. The role of artificial intelligence in enhancing administrative decision support systems by depend on knowledge management. *Bull. Electr. Eng. Informatics* **2022**, *11*, 3577–3589. [CrossRef]
59. Liu, R.; Zhang, H. Artificial-Intelligence-Based Fuzzy Comprehensive Evaluation of Innovative Knowledge Management in Universities. *Math. Probl. Eng.* **2022**, *2022*, 5655269. [CrossRef]
60. Bokhari, S.A.A.; Myeong, S. Artificial Intelligence-Based Technological-Oriented Knowledge Management, Innovation, and E-Service Delivery in Smart Cities: Moderating Role of E-Governance. *Appl. Sci.* **2022**, *12*, 8732. [CrossRef]
61. Liu, Q. Analysis of Collaborative Driving Effect of Artificial Intelligence on Knowledge Innovation Management. *Sci. Program.* **2022**, *2022*, 8223724. [CrossRef]
62. Arias-Pérez, J.; Cepeda-Cardona, J. Knowledge management strategies and organizational improvisation: What changed after the emergence of technological turbulence caused by artificial intelligence? *Balt. J. Manag.* **2022**, *17*, 250–265. [CrossRef]
63. Bilquise, G.; Shaalan, K. AI-based Academic Advising Framework: A Knowledge Management Perspective. *Int. J. Adv. Comput. Sci. Appl.* **2022**, *13*, 193–203. [CrossRef]
64. Baslom, M.M.M.; Tong, S. Strategic Management of Organizational Knowledge and Employee's Awareness about Artificial Intelligence with Mediating Effect of Learning Climate. *Int. J. Comput. Intell. Syst.* **2019**, *12*, 1585–1591. [CrossRef]
65. Yang, H.; Anbarasan, M.; Vadivel, T. Knowledge-Based Recommender System Using Artificial Intelligence for Smart Education. *J. Interconnect. Networks* **2022**, *22* (Suppl. S2). [CrossRef]
66. Sun, P.; Gu, L. Fuzzy knowledge graph system for artificial intelligence-based smart education. *J. Intell. Fuzzy Syst.* **2021**, *40*, 2929–2940. [CrossRef]
67. Gacanin, H.; Perenda, E.; Karunaratne, S.; Atawia, R. Self-Optimization of Wireless Systems with Knowledge Management: An Artificial Intelligence Approach. *IEEE Trans. Veh. Technol.* **2019**, *68*, 9682–9697. [CrossRef]
68. Phan, A.-C.; Phan, T.-C.; Trieu, T.-N. A Systematic Approach to Healthcare Knowledge Management Systems in the Era of Big Data and Artificial Intelligence. *Appl. Sci.* **2022**, *12*, 4455. [CrossRef]
69. Nasseef, O.A.; Baabdullah, A.M.; Alalwan, A.A.; Lal, B.; Dwivedi, Y.K. Artificial intelligence-based public healthcare systems: G2G knowledge-based exchange to enhance the decision-making process. *Gov. Inf. Q.* **2022**, *39*, 101618. [CrossRef]

70. Mercier-Laurent, E. Artificial intelligence for successful Kflow. In *IFIP International Workshop on Artificial Intelligence for Knowledge Management*; Springer: Berlin/Heidelberg, Germany, 2016.
71. Manesh, M.F.; Pellegrini, M.M.; Marzi, G.; Dabic, M. Knowledge Management in the Fourth Industrial Revolution: Mapping the Literature and Scoping Future Avenues. *IEEE Trans. Eng. Manag.* **2019**, *68*, 289–300. [CrossRef]
72. Kot, S.; Hussain, H.I.; Bilan, S.; Haseeb, M.; Mihardjo, L.W.W. The Role of Artificial Intelligence Recruitment and Quality to Explain the Phenomenon of Employer Reputation. *J. Bus. Econ. Manag.* **2021**, *22*, 867–883. [CrossRef]
73. Cantu-Ortiz, F.J. Knowledge management and artificial intelligence analytics: A bibliometric study of research trends. In *A Research Agenda for Knowledge Management and Analytics*; Edward Elgar Publishing: Cheltenham, UK, 2021; pp. 67–88. [CrossRef]
74. Zareravasan, A.; Krčál, M.; Ashrafi, A. The Implications of Blockchain for Knowledge Sharing. In Proceedings of the International Forum on Knowledge Asset Dynamics (IFKAD 2020), Matera, Italy, 9–11 September 2020.
75. Ransbotham, S.; Khodabandeh, S.; Fehling, R.; Lafountain, B.; Kiron, D. Winning with AI. *MIT Sloan Manag. Rev.* **2019**, 61180.
76. Brynjolfsson, E.; Rock, D.; Syverson, C. Artificial Intelligence and the Modern Productivity Paradox: A Clash of Expectations and Statistics. In *The Economics of Artificial Intelligence: An Agenda*; University of Chicago Press: Chicago, IL, USA, 2017. [CrossRef]