



LIBRARY 4.0: AI, IOT AND DATA SCIENCE IN KNOWLEDGE MANAGEMENT

Tippanu Jagannadham

Librarian ,

**Avanathi Institute of Engineering and Technology (A)
Tagarapuvalasa Andhra Pradesh.**

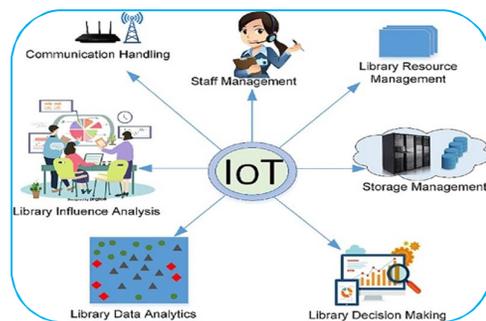
Harihararao Mojjada

Assistant Librarian

**MVGR College of Engineering (A), Vizianagaram
Andhra Pradesh.**

ABSTRACT

Library 4.0 is a transformation venture embarked by libraries to integrate Artificial Intelligence (AI), Internet of Things (IoT), and Data Science in a library's business processes and user engagement systems including knowledge management. Machine learning chatbots, predictive analytics, and automated cataloguing facilitate resource discovery; internet of things-enabled radio identifier devices and environmental sensors improve inventory control and preservation. Utilization of Data Science in Personalized recommendations, plagiarism detection, trend analysis, etc., are applied in enhancing libraries services. However, several challenges such as data security, expensive implementations, and a shortage of employees still affect it. Blockchain will ensure secure transactions, edge computing will be implemented for real-time data processing, knowledge graphs driven by AI will enable semantic search, while smart libraries powered by 5G will ensure smooth connectivity. Examples of Accelerated Library Transformations via Intelligent and Human-Centric Information Access through Intelligent Library Infrastructures As will be addressing ethical implications and digital literacy challenges to fully realize the Library 4.0 potential, ensuring sustainable and innovative knowledge management, and guaranteeing access infrastructure for generations to come."



KEYWORDS: *Library 4.0, Artificial Intelligence, IoT, Data Science, Knowledge Management, Smart Libraries.*

1. INTRODUCTION

Libraries have evolved as technology advanced, from physical collections to digital repositories and automated services. This paradigm shift for libraries is known as Library 4.0, which incorporates AI, IoT and Data Science into knowledge management and user interaction. Libraries now also benefit from technologies that have transformed library operations by automating cataloging, enhancing resource discovery and offering predictive analytics for personalized services.

In this realm, AI-powered chatbots and virtual assistants, process human interactions, embracing the transition from books to bytes, while smart libraries, powered by the Internet of Things

(IoT), facilitate frictionless resource access via automated check-in and intelligent inventory procedures. In addition, Data Science helps libraries to analyze user behavior, optimize the allocation of resources and make better decisions. However, with all of these new developments, libraries need to make sure that they remain focused on addressing some of the challenges associated with these new technologies including data security, digital literacy, and the need for a strong technological infrastructure.

Lib 4.0

Library 4.0 is the transformation of traditional libraries into advanced, technology-driven knowledge centers utilizing Industrial 4.0 technologies. This transformation involves advanced digital technologies, intelligent mechanisms, artificial intelligence, big data analytics, cloud technology, and Internet of Things (IoT) to deliver improved, personalized, and effective library services. In short The Library 4.0 library is a smart and connected library, acting in the automated, intelligent services where all experiences is being individualised in the digital world with a general goal to allow seamless interaction between librarians, resources, technology and the users.

OBJECTIVE OF THE STUDY:

1. To explain AI, IoT, and Data Science into library operations for enhanced knowledge management and user engagement.
2. To describe cataloging, classification, and resource discovery using AI-driven tools, reducing human effort and errors.
3. To optimize library services through predictive analytics, personalizing recommendations, and improving resource allocation.
4. To discuss security, privacy, and transparency in digital transactions using blockchain and secure data management.
5. To foster digital literacy and up-skilling among library professionals to manage and operate smart library systems effectively.

2. REVIEW OF LITERATURE:

All generations are undergoing a paradigm shift in knowledge management (KM) as a result of the impact by the fast-paced evolution of Artificial Intelligence (AI) and the digital transformation. This shift is primarily grounded on data science and machine learning (statistical learning methods, Monte Carlo methods, deep learning...), laying a foundation for AI (**Kroese et al., 2024**). AI-augmented education: AI-powered education, including intelligent tutoring systems and adaptive learning, is more personalized than traditional teaching but raises ethical concerns such as privacy and bias (**Chandhok & Singh, 2024**). AI bolsters data protection in Industry 4.0 by combating cybersecurity threats, performing predictive maintenance, and ensuring regulatory compliance (**Tanisha et al., 2024**). Gradually, by transforming from Web 1.0 to Web 4.0, libraries have been able to provide access to knowledge and the needed engagement to users through the integration of AI and semantic technologies (**Arora, 2024**). Blockchain and IoT take KM to the next level with the possibility of secure, decentralized information sharing, which is very helpful in the enterprise arena (**Yuman & Goyal, 2024**). AI is also an important part of businesses today, as it optimizes knowledge acquisition and distribution, especially with the trend of hybrid work (**Taherdoost & Madanchian, 2023**). AI and IT integration enable business competitiveness through a route into automated decision-making and digital transformation strategies (**Alqahtani et al., 2022**). At the same time, with the Fourth Industrial Revolution (or in terms of its principles and forms) still being developed, it requires practically new approaches to KM for digital transformation, big data, and integration with IoT, and smart systems (**Manesh et al., 2021**). KM and Quality 4.0 are symbiotic, with the dependency on AI, IoT, and blockchain being essential in enhancing quality management approaches while focusing on optimal data processing as a means to achieve quality in manufacturing (**Dovleac, 2021**). AI augments KM in management by integrating with Common Data Environments to streamline document retrieval and decision-making in the UK construction industry (**Jallow et al., 2020**). These breakthroughs highlight

AI's transformational potential for knowledge management in industries ranging from healthcare to finance.

3. RESEARCH METHODOLOGY

This research is conducted using mixed-method research methods to explore the concept of Library 4.0 concerning AI, IoT, and Data Science. Methods A systematic literature review on peer-reviewed articles, conference proceedings, and case studies published from 2018 to 2024. Through searching in the academic database data was obtained on the realization, advantages and disadvantages of smart libraries. Moreover, case studies on AI-based library automation, IoT-supported stock control, and data science in digital knowledge management were investigated. The study additionally explores the perspectives of library professionals through interviews and surveys to evaluate the trends in technological adoption and the skill gaps in the context of Library 4.0.

4. CONCEPTUAL FRAME WORK:

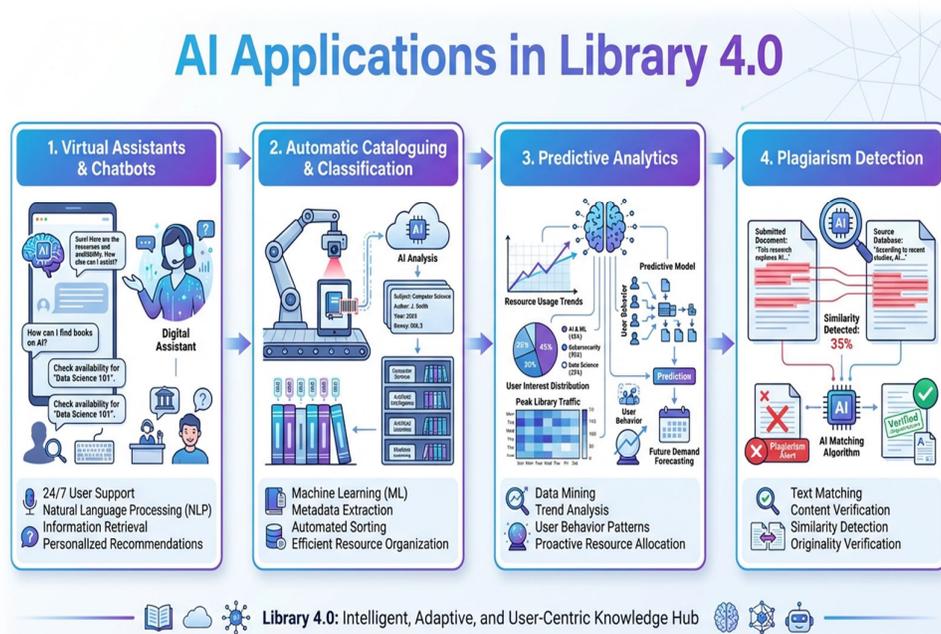


Figure.1 Conceptual Frame Work for Library 4.0: AI, IoT, and Data Science in Knowledge Management

5. AI IN LIBRARY 4.0:

AI plays a crucial role in modern libraries by offering automation and intelligent decision-making capabilities. Key applications include:

Virtual Assistants and Chatbots

Whether dealing with hundreds of everyday queries or answering simple questions, AI systems reduce the burden on librarians and enable AI systems to deal with common questions. These virtual assistants can help users navigate digital collections, find books and access library chores at any time. They relieve librarians of repetitive questions, guide students in their database searches and even help with the referencing. Natural language processing (NLP) helps chatbots understand intricate queries, thus enhancing user satisfaction. Libraries implement AI chatbots on their websites and mobile applications for 24/7 assistance, as well as to make access to information more efficient and user-friendly.

Automatic Cataloguing and Classification

AI-Based Cataloguing systems require less human intervention while driving physical metadata generation and classification. Machine learning algorithms can process content at scale in near real time, capture a variety of key metadata on resources, and classify resources with a high degree of accuracy. This end-to-end automating process minimizes error rates, boosts productivity, and maintains a stable classification schema. AI-based tool (Optical Character Recognition / OCR) can enhance indexing capacity of historical and handwritten documents. AI's auto-tagging capabilities empower libraries to organize their digital assets better, making it easier for users to find and access resources. Automated cataloguing tools working very efficient in creating metadata in multiple languages. So that information becomes accessible to the world.

Predictive Analytics

Predictive analytics is an AI-based tool that enables libraries to become more proactive, operating less reactively in the unstructured world. AI can recommend books and articles based on users' reading patterns, borrowing history, and search queries. This is why libraries use these insights in a collection development process that guarantees that they have high-demand materials. Predictive models also forecast resource needs, cutting down on book shortages. AI-powered analysis informs space utilization, event scheduling and budgeting, so libraries can operate more effectively. In essence, predictive analytics enhances user experience and optimizes resource management.

Plagiarism Detection

Whenever you're writing a paper, AI-based plagiarism detection tools help to ensure academic integrity by checking a research paper against a vast online database. These tools verify duplicate content, bad citations, and paraphrased content to ensure originality. AI plagiarism checkers are trusted by universities and publishers as they want to ensure ethical research. They prevent intellectual property theft, as advanced algorithms detect even subtle similarities. AI-techs are preparing extensive summaries, showing way for corrections and references. Automatically identifying instances of potential plagiarism enables libraries to help students and researchers to promote authentic and high-quality academic work.

6. IOT IN LIBRARY 4.0

IoT is such an important aspect of Library 4.0: knitting traditional libraries into a smart conductive thread of connected scenarios. IoT solves up in terms of operational efficiency, resource management, and user experience with the help of sensor-based devices, automation, and real-time data analytics. With RFID systems, environmental sensors, and additional smart devices, these automatic tools remove operations that are not important, save time and increase accessibility to ensure efficient workflows. These tools enable the easy circulation of books, efficient utilization of library space and better preservation of library resources. Libraries utilize IoT to improve the quality of service delivery, manage inventory lists, and create an intelligent learning environment to meet the dynamic needs of users and researchers.

RFID and Smart Shelving

Internet of Things (IoT)-driven Radio Frequency Identification (RFID) tags revolutionize how books are tracked, check-in procedures, and self-service borrowing. RFID-based smart shelving units can identify and alert the staff regarding the misplacement of books instantly and eliminate the need of scanning books one at a time for accurate searching and locating. And book drops are going automated for contactless returns — so long again at brewski! IoT-based RFID allows libraries to combat human errors, enhance security & customize the circulation workflow by supplying accurate data. Smart Bookshelves that informs employees when the books are running low or coded incorrectly to maintain their collection in an organized fashion. These also help to make audits of the inventory, prevents the pilfering of books, and provides data on book movement in real time, making library management more efficient, customer friendly and tech-savvy.

Environmental Monitoring

Environmental sensors based on IoT help maintain perfect temperature, humidity, and air quality of a library, in which the collection of books, manuscripts, and analogue and digital equipment can be maintained. Sensors constantly monitor and adjust climate conditions to guard against the growth of mold, degradation of paper and static damage to electronics. Staff are automatically alerted to changes in the environment, allowing them to respond quickly. Energy-efficient HVAC system provides safety in books and optimizes electricity consumption. Environmental control enabled by IoT also adds to the comfort of the user so as to provide a good reading environment. "Combining real-time monitoring with automated adjustments will help preserve library resources for the long-run, allowing for a technology-based, sustainable preservation strategy," Nelson said.

User Activity Tracking

IoT-based seating and footfall sensors can understand user patterns, enabling libraries to optimize their space, seating configuration and ensure a smooth flow of people in and out of the library. Using this data, the sensors can monitor where and at what times students are studying most and least to better manage space usage. Smart tracking helps in queue management, study room reservations, and security monitoring, thereby enhancing user experience. IoT Devices: Data-Driven Insights Library Design & Renovation The enhanced user engagements such as recommending a study zone based on past behavior as shown in Fig. Utilizing IoT for real-time activity tracking optimizes operations and enhances the user experience, making it more efficient and adaptive for the evolving needs of learners and researchers.

Inventory Management Automation

With the help of IoT, real-time inventory tracking technologies are used to keep records of books and missing items in the library and track the movement of assets. RFID tags and smart sensors automate inventory audits, eliminating manual labour and human error. These systems alert handlers when books are in the wrong location, overdue or require replacement. In addition to automated tracking, libraries can analyze borrowing trends to make better acquisition decisions and allocate resources more appropriately. The benefit of IoT extends to library management systems that improve theft prevention and reduce stock shortages. So by automating the book location tracking, predictive maintenance of resources, Libraries can save time, increase efficiency and user satisfaction by providing seamless, data-driven library experience.

7. DATA SCIENCE IN KNOWLEDGE MANAGEMENT

Data Science plays a major role in the evolution of Knowledge Management processes that are responsible for extracting, processing and using data, utilizing big data and advanced analytical techniques. Libraries collect huge quantities of data, including circulation logs, search queries, and engagements with digital resources. However, applying data science techniques can help interpreting and finding insights from this data, analyzing trends, and supporting data-driven decisions that can enhance the services provided by the library. Artificial intelligence, machine learning and big data analytics can help libraries improve the user experience, get better resource allocation and provide long-term knowledge preservation. In libraries, data science and knowledge management collaborate to maximize digital libraries, expand the research process and promote evidence based methods of sourcing information.

User Behaviour Analysis

Enable data-informed collection development: Libraries can analyze user behavior, such as borrowing history, search patterns, and resource usage to develop data-based collection development strategies. Librarians use statistical, data science, or machine learning techniques, such as clustering, predictive analytics, and trend analysis, to understand what types of materials are popular. This enables libraries to simplify acquisitions, monitor budgets more effectively and maximise user satisfaction." Most importantly, the analysis of user engagement will shed light on opportunities to create more

tailored services, such as tailored reading programs or longer loan periods for in-demand resources. It not only enables users to access information in a quicker and personalized manner, but insights driven by AI further ensure libraries stay in line with evolving demands. Therefore we can know if those books are doing their job for our user, and essentially the data driven exercise leads to a more accessible library, which is our final goal.

As a text mining and sentiment analysis expert

Libraries use text mining and sentiment analysis to analyze academic trends, user comments, and scholarly interests. Moreover, by processing significant volumes of digital texts, libraries may better assess emerging research topics and knowledge gaps, allowing them to adapt and tailor services. Sentiment analysis analyzes user reviews, social media conversations, and survey responses to obtain the satisfaction levels. As such, it sets the stage for libraries to improve their offerings, increase user engagement, and create better algorithms for recommending content. With Natural Language Processing (NLP), we can automate the analysis of textual data, so we can extract knowledge more efficiently. This knowledge comes into play with respect to the academic exigencies with which libraries are to align, adopting new collections to enhance their standards to reach their most effective service (Veen & Ponniah, 1997).

Digitisation and Digital Archiving and Preservation

Digital archiving and preservation depend a great deal on data science; such technology is integrated in automated AI tools that protect historical papers, rare manuscripts, historic documents, and institutional records. Libraries use machine learning methods for automatic metadata generation, optical character recognition (OCR) for digitizing printed materials, and blockchain for the secure storage of digital assets. Such models provide methods for identifying materials that might have undergone or be at risk of deterioration, and thus, inform preventive conservation strategies. Cloud-based storage solutions and AI-driven indexing make them more accessible for future use. By establishing sustainable digital repositories through data science, libraries can preserve valuable knowledge resources for future generations, while preventing potential risks of data loss and degradation.

Personalized Recommendations

Machine learning algorithms employed by businesses for personalized recommendations improve data science in the area of publishing, suggesting books, articles, and other research materials to users based on their interests. Using collaborative filtering and content-based filtering approaches, it analyses previous reading habits, search behavior, and borrowing history to output personalized recommendations. Utilizing AI technology and libraries AI-driven recommendation engines, enhance the user experience more, improve your engagement. The power of personalized learning paths, adaptive reading lists, and dynamic content suggestions render exploration and acquisition of knowledge extremely effective. By using data for insights, libraries provide a more user-focused service, making sure the user has access to the right and relevant recommendation at the right time to support information access and social learning.

8. CHALLENGES AND LIMITATIONS

Library 4.0, driven by AI, IoT, and cloud computing, revolutionizes library services, enhancing accessibility and automation. However, its adoption presents challenges, including data privacy risks, high implementation costs, skill gaps, and ethical concerns. Addressing these issues is crucial for ensuring secure, equitable, and efficient smart libraries.

Data Privacy and Security

Protecting user data in Library System 4.0 An increasingly prevalent trend arising from the implementation of artificial intelligence (AI) and cloud-based systems, the foundation of Library System 4.0, is the Internet of things (IoT), which presents significant concerns regarding unauthorized access

attempts, data breaches, and the risk of hacking. Hence, the libraries must establish robust encryption, authentication tokens, and compliance with the data protection legislation to ensure the privacy of each member's information. There are a range of advantages to embracing the technologies of Library 4.0; however, for organizations that wish to stay with the times of changing technologies, it is always important that their use of digital resources does not violate the security and access of library services.

High Implementation Costs

The adoption of smart library service requires significant investment in AI powered software, IoT devices, cloud computing, and automation tools. Initial expenses are high, as infrastructure must be upgraded, new systems purchased, and people trained. Certain facilities, particularly in burgeoning regions, are not financially able to provide enough funding. But sustainable financial strategies, gradual and multistage implementation and more government or institutional funding assistance could ease this burden.

Skill Gap

The Library 4.0 environment needs librarians with sound technical insights in AI, machine learning, IoT, etc. But few professionals are formally educated in emerging technologies. Continued professional development, niche training programs, and guides from technology specialists will help close this gap in skill. Where smart library solutions can be beneficial for the users to develop good & right habits and can cause effective optimization but on the flip side the library staff without the appropriate upskilling can be adversely impacted.

Ethical Considerations

With the adoption of any new technology comes its own set of challenges and the advancement of AI in libraries raises questions about bias, data privacy, and the transparency of algorithms making decisions on our behalf." Societal bias can be absorbed into AI models that can encode bias or inequity into the system, damaging access to information¹². AVX's ai-driven library services should be equitable, responsible and transparent. Libraries are challenged to address these issues by establishing ethical AI policies, conducting regular audits, and promoting responsible use of AI.

9. FUTURE TRENDS IN LIBRARY 4.0

Library 4.0 will be disrupted to an unexpectedly deeper level with the arrival of new technologies that will transform those performance indicators with blockchain, edge computing, and AI-driven knowledge graphs. Edge computing provides real-time access to digital resources, while blockchain enhances security and transparency during transactions. AI powered knowledge graphs help transform research discovery with natural searches, customized suggestions, and improved information retrieval. They will enable libraries to remain responsive, impactful, and safe hubs of knowledge in the digital landscape.

Blockchain Technology for Secure Transactions

It can further enhance the security, transparency, and efficiency of library transactions such as digital lending, record-keeping and intellectual property management. It uses decentralised ledgers to avoid tampering, which guarantees data integrity. Libraries can also use blockchain technology for user authentication, digital rights, and immutable archivation] to use consensus system of distributed databases that harmonize user data by the use of swappable ledgers in view to verification.

Real-time Processing Using Edge Computing

Putting computing and data storage close to the sources of data (camera, internet of things sensors, etc.) makes edge computing minimize the lag of moving data and processing from remote clouds servers. This aids libraries to advance real-time access to digital resources, maximize bandwidth and upgrade the user experience. It facilitates smart cataloging, automatic inventory management, and

instant AI-driven recommendations. 10x the response times allows the libraries to serve the digital content seamlessly, relieves the network, and therefore makes everything much more efficient.

AI-driven Knowledge Graphs

Intuition Based Search: Searches based on the underlying graph provide much more context to a research inquiry — with AI's power in real-time linking of related concepts, entities and datasets, the order of the results makes far more sense. These attributes improve semantic search to provide the user with a relevant response to ambiguous queries. By organizing complex information relationships, libraries can offer personalized recommendations, more in-depth explanations of academic content, and better information retrieval. Here is where AI-powered assistant will take us into a new kind of digital library, one that is more widely available, connected and context-sensitive.

5G-enabled Smart Libraries

A 4G technology connects the library-goers (or educators) to the required content anytime, anywhere while 3G technology doesn't offer the same. It will enable low latency and increased bandwidth for VR learning environments, AI analytics and even automated library services. Libraries can offer smart book tracking, access to vast digital archives from a distance and collaborative research capabilities. This ultra-fast connection leads to a much better-owned library experience of the digital economy, streaming knowledge units instantaneously, and interacting with them instantly from anywhere in the world.

10. CONCLUSION:

Library 4.0 is a new era in managing knowledge, delivering services, and responding to users. We have seen the convergence of AI, IoT, and data science as well as blockchain toward the transformation of traditional libraries into smart ecosystems where user engagement is enriched, operations are automated, and resources are managed optimally. AI-fueled chatbots, automated cataloguing, voice predictive analytics and IoT-enabled smart shelving are bringing considerable improvements to their efficiency and accessibility. Despite being popular, there are several data privacy concerns, high implementation costs and skill gaps that need to be addressed for smooth adoption. Concerns around ethics, especially in relation to AI-guided decision-making, must also be handled with care. Future advancements and technologies such as blockchain for secure transactions, edge computing for real-time processing, AI-based knowledge graphs, and 5G-enabled smart libraries will attribute to flourishing the capabilities of Library 4.0 to the next level. Stay tuned in technology, staff training, ethical AI governance will be significant.

11. REFERENCES:

1. Alqahtani, N. M., Alqahtani, N. K., & Aksoy, N. M. S. (2022). The Role of Artificial intelligence and information Technology in Promoting knowledge management in business Firms: a review. *International Journal of Engineering and Management Research*, 12(2), 13–23. <https://doi.org/10.31033/ijemr.12.2.3>
2. Arora, J., Tims Berner Lee, Tim O'Reilly, John Markoff, & Michael Casey. (2012). *Web 2.0 and Web 3.0 and its Applications in Library Services* [Thesis].
3. Chandhok, V., & Singh, G. (2024). THE EVOLUTION OF LEARNING: A SURVEY OF AI TECHNOLOGIES IN EDUCATION. *International Journal of Advanced Research*, 12(04), 491–495. <https://doi.org/10.21474/ijar01/18573>
4. Dovleac, R. (2021). Knowledge management systems in Quality 4.0. *MATEC Web of Conferences*, 342, 09003. <https://doi.org/10.1051/mateconf/202134209003>
5. Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J., Eirug, A., Galanos, V., Ilavarasan, P. V., Janssen, M., Jones, P., Kar, A. K., Kizgin, H., Kronemann, B., Lal, B., Lucini, B., . . . Williams, M. D. (2019). Artificial Intelligence (AI):

- Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 57, 101994.
<https://doi.org/10.1016/j.ijinfomgt.2019.08.002>
6. Kroese, D. P., Botev, Z. I., Taimre, T., & Vaisman, R. (2024). *Data science and machine learning mathematical and statistical methods*.
 7. Manesh, M. F., Pellegrini, M. M., Marzi, G., & Dabic, M. (2020a). Knowledge Management in the Fourth Industrial Revolution: Mapping the literature and scoping future avenues. *IEEE Transactions on Engineering Management*, 68(1), 289–300.
<https://doi.org/10.1109/tem.2019.2963489>
 8. Manesh, M. F., Pellegrini, M. M., Marzi, G., & Dabic, M. (2020b). Knowledge Management in the Fourth Industrial Revolution: Mapping the literature and scoping future avenues. *IEEE Transactions on Engineering Management*, 68(1), 289–300.
<https://doi.org/10.1109/tem.2019.2963489>
 9. Rasheed, A., San, O., & Kvamsdal, T. (2020). Digital Twin: values, challenges and enablers from a modeling perspective. *IEEE Access*, 8, 21980–22012.
<https://doi.org/10.1109/access.2020.2970143>
 10. Suresh, S., Olayinka, R., Chinyio, E., & Renukappa, S. (2016). Impact of knowledge management on construction projects. *Proceedings of the Institution of Civil Engineers - Management Procurement and Law*, 170(1), 27–43. <https://doi.org/10.1680/jmapl.15.00057>
 11. Taherdoost, H., & Madanchian, M. (2023). Artificial intelligence and Knowledge Management: Impacts, benefits, and implementation. In Phivos Mylonas, Katia Lida Kermanidis, & Manolis Maragoudakis (Eds.), *Computers* (Vol. 12, p. 72). <https://doi.org/10.3390/computers12040072>
 12. Tanisha, J., Pillai, A. R., Roy, G. S., Koshy, A., Kothari, S., & D. Ajitha. (2024). Privacy and data protection challenges in industry 4.0: An AI-driven perspective. *World Journal of Advanced Engineering Technology and Sciences*, 12–02, 064–089.
<https://wjaets.com/sites/default/files/WJAETS-2024-0287.pdf#:~:text=technological%20advancements%20and%20ethical%20considerations,116>
 13. Tien, J. M. (2017). Internet of Things, Real-Time decision making, and artificial intelligence. *Annals of Data Science*, 4(2), 149–178. <https://doi.org/10.1007/s40745-017-0112-5>
 14. Yuman, Y., & Goyal, S. B. (2022). Knowledge Management using IoT-Blockchain Technology: State of the Art. *International Journal of Electrical and Electronics Research*, 10(2), 183–189.
<https://doi.org/10.37391/ijeer.100223>.
 15. Figure.1 retrieved by scispace by prompting the required output through the url <https://scispace.com/chat/596e2f51-0837-46e2-a2cb-e58f8d41e114>.