



## Changing Roles of Librarians in the Age of Artificial Intelligence

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### **Abstract:**

*This paper focuses on the quick progress of Artificial Intelligence (AI) has greatly changed the field of Library and Information Science (LIS). Old library tasks like organizing books, sorting them, helping people find information, and retrieving data are now being handled more by AI tools and systems. This change has made a big difference in what librarians do as a job. This paper also exposes librarians' roles are changing due to AI. It tells about new job duties, the skills they need, the difficulties they face, and the ethical issues that come up. Examines librarians are moving from just keeping information to managing it, curating digital content, working with data, and helping people access knowledge in libraries that use AI. The paper ends by saying AI doesn't take away librarians' jobs, but it changes what they do, and they need to keep learning and keep up with new technology.*

**Keywords:** *Artificial Intelligence, Librarianship, Smart Libraries, Digital Libraries, Information Professionals*

### **Introduction:**

Libraries play an important role in education. Libraries are the soul of the knowledge. It is historically central to the institutions for sustaining of knowledge. Libraries have adopted changing information and communication technologies (ICT). It also changes to users needs. We can see the many changes are happening in the libraries because of incoming new technologies. In 21<sup>st</sup> century Artificial Intelligence has developed and emerged as transformative forces and it is reshaping the information systems in every field such as education, industry and banking system as well as in libraries. Artificial intelligence playing crucial role in libraries. It works faster than human brain. It performs every task in a second. It performs in learning, reasoning, language processing and decision making. In libraries Artificial Intelligence work in every field such as searching books on search engines, finding books on automated cataloguing and chatbots. We can see

the lots of significant development in functional responsibilities of librarians.

### **Role of Artificial Intelligence in Libraries:**

Artificial Intelligence tools such as machine learning, natural language processing (NLP), data analytics, optical character recognition (OCR) are working in 21<sup>st</sup> century in every library. Even it is the task of the librarians to handle and learn the new technologies.

#### **(1) Automated Metadata Generation:**

It helps to know the descriptive information for library resources by machine learning and natural language processing. It also guides easily about the extract keywords, name of the subjects, about the author and abstracts automatically from the digital information. It also improves the speed to finding books and more accuracy in cataloguing MARC, Dublin Core and RDA metadata.

**(2) Intelligent Information Retrieval:**

It helps to improve the search accuracy and the relevance of that book. Its stores every type of queries and the history that is the past search of the books and content relationships to provide the true result. It reduces the stress and improves the satisfaction of the users.

**(3) Virtual reference services:**

It uses chat box and expert systems. It gives information within a second. It shows the right path to deliver resources. It also reduces the physical work of the users.

**(4) Users' behaviour analysis:**

It helps to provide analytical data and study patterns. It also focuses on search passes borrowing habits of the users and the use of digital resources artificial intelligence provides the signal to understand the users need.

**(5) Digitisation and preservation of resources:**

Artificial intelligence has to digitisation and preservation of resources OCR converts scanned text into digital platforms. Machine learning improves images Restoration and text recognition accuracy.

**Traditional Roles of Librarians:****(1) Acquisition and selection of resources:**

Traditional librarians were able to select an acquiring books journals and other materials on the basis of needs and the budget of the library. It used to focus on the interest of users and sub knowledge.

**(2) Cataloguing and classification:**

It using standard scheme such as TTC, UDC and LCC. It has to easy retrieval and logical arrangement of the resources but this processor requires the accuracy consistency and the professional expertise.

**(3) Reference and information services:**

It is the most important function of the library. It helps to generate queries answers print and electronic sources. But it requires

communication skills subject knowledge and familiar with tools.

**(4) Circulation and user assistance:**

It has to issuing and returning box and sustain the records of users in the services users directly came to the contact with the library staff and services. And users understand the rules of library manually.

**(5) Preservation of print materials:**

It is the most important responsibility of it includes caring of the books repairing of the books, journals and documents and protection of the books it is important to preserve and sustained the historical and cultural materials

**Information Managers and Knowledge Facilitators:**

With the advent of AI, librarians have developed into competent information managers and facilitators. The immense amount of information produced by AI-based systems is causing information overload, becoming one of the major problems faced by the user. Librarians manage, filter, and provide access to information that is credible, authentic, and relevant. Librarians also assist users in evaluating the legitimacy of the information, enabling the users to distinguish between authentic information and information that is false or biased. The ability to provide substantial access to information, as opposed to mere information availability, is the strength of the librarian.

**Digital Curators and Content Managers:**

Contemporary librarians find themselves taking on a wider range of roles, particularly in the area of curating and managing content within the context of the AI-powered library. They find themselves charged with the duty of overseeing and managing institutional content, eBooks, online journals, and multimedia content. Although AI-powered technologies help in the

process of digitizing, organizing, and retrieving information on a larger scale, the intervention and input of the librarian assume critical importance here since they can provide the larger context, the cultural, and the ethical perspectives.

#### **Data and Metadata Specialists:**

AI models are heavily dependent on structured, quality, and accurate data for their proper functioning. The job of the librarian, at this moment, is to be a data and metadata professional. They are responsible for the organization, standards, interoperability, and cleaning of the data. Their skills and services are essential for the discoverability, use, and responsible use and management of the data. They create the schema, use standardized languages, and keep the consistency at the digital level. Their efforts are also essential to increase the accuracy and efficacy of the AI model-based retrieval and recommendation systems. Such professionals are crucial in the management of research data.

#### **Technology Mediators and AI Trainers:**

Considering AI libraries, the task of 'technology mediators' portrayed by librarians bridges the gap, which exists between the users and more complex systems of Artificial Intelligence. They assist and enable the users to understand and make use of the advanced features of AI libraries, such as intelligent search engines, dialog systems, recommendation systems, and virtual assistants. The librarians have the task of enhancing the performance of AI systems and are responsible for providing them with knowledge and ethics guidelines in their specific domains of operation. This further ensures the effectiveness of AI utilization in libraries and enables the creation of a confident environment among the users for access to it.

#### **Educators and Information Literacy Trainers:**

However, the recent trend in the availability of AI-created content, misinformation, and deepfakes has given rise to the role of librarians as information literacy teachers and educators. They instill digital, media, and AI literacy skills in the users, educating them on how to properly evaluate the source of the information and the content created by AI. They train the users on the ethics of the information, the protection of the data, copyrights, and the unbiased nature of the algorithms. Through such education, the librarian equips the users on how to be enlightened and informed users of the information.

#### **AI Era Required Librarian Skills and Competencies:**

The face of librarianship is changing in the AI age. It requires a set of new skills and competencies. A good technological literacy level, along with basic ideas about AI and data analysis, are required in a librarian today. A basic understanding of information ethics, data privacy issues, and intellectual properties has become a must-have requirement. Research abilities are necessary in a librarian since this skill will help them serve their target audiences effectively in academia and professional settings much better.

#### **Technological Challenges:**

One of the challenges that will confront librarians in embracing AI technology is the lack of adequate technological infrastructure. The cost of AI technology, software, and maintenance is beyond the capacity of many, especially in developing nations. Many library systems have inadequate financial resources and technology support personnel. Furthermore, the rate of technological changes is too immense for adequate updating. The lack of proper training programs will expand this technological gap.

These are some of the challenges that will prevent the full integration of AI technology in library provision.

### **Ethical and Privacy Concerns:**

There are serious ethical and privacy concerns with the implementation of AI technology in libraries. AI technology involves the collection and processing of user information, raising concerns related to surveillance of data privacy. There may be some forms of discrimination related to the processing of information, leading to the misrepresentation of certain groups. Concerns arise related to the authorship of intellectual property with the implementation of AI technology in the creation of content. Librarians have the role of addressing these concerns to ensure the ethical implementation of AI technology.

### **Professional Identity and Job Security:**

With the growing adoption of AI, concerns related to employment and identity have emerged among librarians. The delegation of simple tasks through AI has made librarians apprehensive about losing their jobs. In contrast to this apprehension, AI does not render librarians unnecessary; it merely gives them a new definition. Rather than engaging in administrative jobs, librarians today require higher-order thinking jobs as intellectuals, analysts, and service providers. The skills and knowledge of librarians in areas related to information ethics, user interaction, and information mediation can never be automated.

### **AI and the Future of Librarianship:**

The future of librarianship will be demanding in synergistically combining human collaboration with AI. AI can enhance the efficiency of performance by making things automated and adding strength to the information-

seeking process. For these, AI should get benefitted by the inclusion of judgment, ethical understanding, empathy, and comprehension from the side of the librarians. Libraries would always remain a source of knowledge with a special concern for learning, study, innovation, and education. They would serve as navigators, educators, and moral authority holders in a world where online realities are growing intensely.

### **Conclusion:**

Artificial Intelligence has revolutionized the role of the librarians completely and transformed them not only into the traditional guardians of books but also into dynamic information professionals and knowledge facilitates in the digital environment. The adoption of Artificial Intelligence challenges the librarians to update their skill set, become lifelong learners, and also become active designers of Artificial Intelligence-based services. Artificial Intelligence is not a threat but rather an opportunity to upgrade their role and significance as professionals and value-based service providers. The future of Libraries will prominently feature a combination of innovative technology and expert knowledge. The librarians, leveraging Artificial Intelligence, will remain a pivotal force in creating a knowledge-based ethical society.

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