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Developing AI Literacy among Students in Central University Libraries: A Study

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Abstract

Now-days, Artificial Intelligence (AI) has emerged globally as one of the revolutionary force in several global areas globally which includes education, science and technology. In the Indian setting, education plays a crucial part in development of socio-economic situations, there are opportunities and obstacles associated with integrating AI in education sectors. The Librarians handle all aspects of the university's information needs which includes gathering, producing, storing, and instructing users on how to use information safely and profitably. Despite having a high level of computer literacy, the majority of today's college students struggle to evaluate the reliability of the material that is so easily accessible. Solving complicated problems requires teaching students how to locate, assess, and apply information in an academically-oriented way. A strong library foundation is essential for academic achievement. However, Librarians develop a framework for accession of knowledge in the changing context of university education in collaboration with researchers and teaching faculty. This paper attempts to examine the adoption landscape of in Developing AI Literacy among Students in Central University Libraries, concentrating on the difficulties it presents and the opportunity it presents to improve learning results.

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Introduction

The building of intelligent computers that can even perform activities that typically require human intelligence is the aim of the computer science field which isknown as artificial intelligence (AI). Artificial intelligence (AI) systems are designed to see and comprehend their surroundings, reason, learn from data, and make decisions or accomplish particular tasks.

The term "AI literacy" describes the comprehension, abilities, and knowledge needed to properly engage with, apply, and evaluate artificial intelligence systems. It entails having a fundamental understanding of data processing, machine learning, and algorithms as well as how AI systems work. However, Along with the efficient application of AI tools for problem solving, work automation, and decision enhancement, AI literacy also includes the capacity to assess the ethical, sociological, and potential biases of AI technology.

The significant goal of AI is to develop machines such as natural language, pattern recognition, and problem-solving, that can replicate human cognitive capacities and also processing, speech recognition, planning, and decision-making. AI includes various techniques and methodologies, including machine learning, deep learning, and expert systems, to enable computers to perform tasks with intelligence.

The Algorithms and models that enable machines to improve performance through data-driven learning without the need for explicit programming are the subject of machine learning, a subset of artificial intelligence. The Deep learning which is a subset of machine learning, utilizes neural artificial networks inspired by the structure and functioning of the human brain to solve complex problems.It is used in fields like healthcare, finance, transportation, manufacturing, entertainment, and more. AI technologies are employed in areas such as virtual assistants, recommendation systems, autonomous vehicles, fraud detection, medical diagnosis, and predictive analytics. But there are drawbacks and things to keep in mind while using AI. To make sure AI systems are created and used responsibly, it's crucial to take prejudice, privacy, openness, and ethics into account. The goals of ongoing AI research and development are to strengthen AI systems' capacities, explanation capacities, and ethical frameworks. In general, AI has the power to transform entire sectors, increase output, and provide solutions for challenging issues. It still presents fascinating chances for creativity and is changing many facets of our life.

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Importance of AI Literacy in Higher Education

The Information and communication technologies (ICT) are ubiquitous and have impacted many facets of our everyday life, covering many domains of human endeavour. Science and Technology has significantly changed over the past few decades, bringing about a fundamental shift in the practices and methods used in a variety of industries, including business and government. While ICT's influence on education has not reached the same degree, it is starting to make a discernible difference in this domain. Developing cutting-edge educational strategies and encouraging the growth of 21st-century cognitive abilities and skills are the main goals of ICT integration in the classroom. However, It is possible for instructors and students to fully utilize the potential of ICT by integrating it into the educational landscape, which guarantees the efficient integration and use of all technical resources. Furthermore, the utilization of ICT in the classroom serves as a stimulant, augmenting pupils' drive and excitement towards efficient education. Artificial intelligence, or AI for short, which is defined as a collection of computer programs and technologies designed to mimic the structure and mental faculties of the human brain. The two types of AI systems that fall within which are thinking and mechanically intelligent. While thinking-intelligent systems are able to learn from data and modify their performance accordingly, mechanically-intelligent systems are highly adept at doing repeated tasks in an efficient manner. AI systems rely on a huge database of big data, which contains a variety of information formats like text, audio, and video, to reach this degree of intelligence. This large dataset allows AI systems to learn and improve their efficiency through computational techniques like deep learning and machine learning. In order to increase productivity, the workforce of the future will require multiskilled, clever individuals who can work well with algorithms, data, and machinery. In an effort to prepare the next generation of workers for an uncertain work climate, Indian firms have initiated a technological revolution in the field of smart education. The problems with India's educational system, such as inequity, access constraints, and poor instruction, are lessened with the use of technology.In India's rising economy, educators teach 340 million students in 800 universities, 40,000 colleges, 12,000 stand-alone higher education institutions, and 0.15 million schools (Press Trust of India, 2020). India is believed to have a competitive edge due to its demographic dividend, but a substantial reform of the educational system is needed to fulfil the demands of the future labour market.

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AI Literacy and Digital Literacy Gap in India

The potential impact of artificial intelligence (AI) on education has garnered significant attention in light of recent breakthroughs in the field like technology; artificial intelligence has advantages as well as disadvantages. Technology must advance to the last mile in order to support equality in the classroom and other areas. AI has the power to transform education for the most marginalized students and lessen educational gaps. It seems inevitable that artificial intelligence (AI) will change schooling. India is on the verge of a digital revolution and is going to become a major force in the world economy. With a strong emphasis on digitization and significant economic growth, the country has a special potential to leverage AI. The workforce in India has to be given the digital skills it needs to succeed in an AI-driven future. Even while India has made headway in adopting digital technology, closing the skills gap can help the country advance even faster. India needs to re-skill half of its present workforce and prepare 30 million people with digital skills, thus it needs to prioritize inclusive growth and make sure that marginalized young are not left behind. Technology empowers marginalized kids and underrepresented groups by acting as an equalizer. The World Economic Forum estimates that upskilling could help India become a global workforce powerhouse and provide substantial economic benefits of up to $570 billion by 2030. In India, attempts to increase digital literacy have sped up the adoption of technology, according to a survey by the Observer Research Foundation. As Indian enterprises, 69% identify as "digital businesses," and the nation has the highest fintech adoption rate, at 87%. Although the speed at which digitalization is occurring is positive, equitable growth depends on closing the digital literacy gap, especially in rural and economically disadvantaged areas.

Closing the digital literacy gap can help marginalized workers become more employable. Enhancing fundamental abilities can help level the playing field for applicants from different backgrounds, especially non-technical ones like communication and critical thinking. By giving them the skills necessary to succeed in the modern workforce, a holistic development approach may empower young people. Both economic equality and the equitable distribution of technical gains can be achieved through comprehensive skilling initiatives for the rural workforce.Artificial Intelligence (AI) is expanding quickly and is predicted to have a big influence on the development of society soon. We see some robots using artificial intelligence (AI). In fact, in some movies, such as RoboCop, Robot 2.0, or Terminator, we see robots with a full range of cognitive capacities, including the capacity to think like humans, feel emotions, and respond

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intelligently and autonomously to their environment. We have also witnessed at COVID-19 the vital role that robotics and artificial intelligence (AI) play in industries including supply chain management, tracing, and healthcare, all of which have greatly improved people's ability to live in the new order. It is crucial to realize that improper use of artificial intelligence can have a negative impact on society at large as well as on humankind.

Role of Libraries in Promoting AI Literacy

Libraries have been safeguarding knowledge and fostering intellectual growth for ages. It might be necessary to define libraries' place in the digital age given the speed at which technology is developing, especially with the emergence of AI. This essay seeks to investigate the lasting value of libraries, highlighting their pervasiveness in spite of artificial intelligence's revolutionary effects. Through comprehending and utilizing AI's potential, libraries may uphold their goal and continue to be essential community assets. Although AI has clearly changed many aspects of our life, libraries are still essential for a number of reasons. The Books, magazines, and multimedia materials are just a few of the resources that are still available to the public through libraries. Because of its accessibility, knowledge is not restricted to those with access to digital devices and promotes inclusivity. Libraries are vital community centers that foster cooperation, communication, and involvement. In a time where digital communication rules, libraries provide actual spaces where people may study, exchange ideas, and have deep conversations. Libraries are essential for maintaining cultural legacy and advancing digital literacy. In order to preserve historical records, manuscripts, and other priceless treasures for future generations, they function as guardians of these items. Libraries also support digital literacy initiatives that assist people understand the intricacies of the digital world and use AI to advance both personally and professionally.

Though AI technologies have improved digital information access, there is still a digital divide that restricts equal access to knowledge. Libraries are essential in closing this gap by guaranteeing that all people have access to digital resources and information, regardless of their financial situation. Libraries enable people to acquire vital digital skills, use internet resources, and critically assess information through programs like digital literacy campaigns and public computer facilities. Thus, in the AI era, libraries continue to support equal knowledge access and digital inclusion.

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Libraries are active community places that encourage participation, education, and teamwork. Physical libraries continue to be essential community centres where people may congregate, take part in seminars, attend lectures, and have in-depth conversations, even in the age of internet platforms. Libraries encourage people of all ages in their educational endeavours by offering venues for lifelong learning. Libraries foster social interactions and the sharing of ideas through reading clubs, author presentations, and educational initiatives—activities that artificial intelligence is unable to match.

Role of Librarians in AI Literacy

The librarians help to organize the library's database to make it easier for users (students, teachers, scholars) to find materials and resources. There can be various requirements for them from the library they work for. Big library librarians, for example, usually specialize in children's libraries, IT management, or administration.

The Information, whether it was written on paper, or clay tablets, has always been a concern for libraries. Even though the library's design is always changing, the transition from print to electronic delivery has minimal bearing on how the library operates. The print storage facility of the past is not the university library of today. The "book morgue" is making way for WIFI study areas where students can access an ever-expanding selection of electronic books, journals, diagrams, graphs, and three-dimensional animations for individual or group study sessions. The Information seeking, assessment, and presentation are issues that concern cataloguing, research, and administrative librarians as well as library managers. In order to better serve the needs of the disciplines they are assigned to, university librarians specialize in certain areas of study. The librarians at the University primarily support the research interests of the staff and students in the College of Behavioural and Community Sciences, but they also attend to requests from the public, guest scholars, and the state legislature. Still, students make up the vast majority of consumers.

The use of internet has fundamentally changed the world of information, and as a result, the university recognizes that information literacy education is necessary. While librarians were once responsible for compiling trustworthy resources based on papers , they are now also trained to help students think critically about research problems, identify information needs, assess the information they gather from a dizzying array of sources, and use it responsibly.

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The ability of students to assess the material they have access to, to recognize the reliability of their information sources, and to compile a variety of sources into a cohesive topic are all necessary for academic achievement. These skills are referred to by a number of names, such as "critical thinking," "information literacy," "information skills," and "information proficiency." In addition to producing educational films that serve as pedagogical aids in courses, librarians are invited to attend meetings about the evolving vision of a university education and work with teaching faculty members to shape course syllabuses such that assignments include meaningful learning opportunities thatcombine academic material with library abilities. They also collaborate with department chairpersons to design curricula that allow students to assess and work with the academic material in their profession in an effective and efficient manner.

Conclusion

The goal of artificial intelligence (AI) is to create systems that can be identify patterns, trends, and anomalies in large datasets. With this kind of skill, AI can extract significant insights, discover correlations, and make predictions that have applications in a variety of domains, including marketing, finance, and healthcare. However, Academic success depends on students being able to locate, assess, and use information in an academically-oriented manner. In the dynamic field of higher education, librarians collaborate with research teams and faculty members to provide a framework for knowledge acquisition. The university's information needs are met by librarians on all fronts, including creation, acquisition, storage, and training for secure and productive use. I have illustrated librarians'responsibilities as educators, researchers, gatekeepers, and partners in the implementation of AI literacy in this piece. I should stress, though, that all of these responsibilities are included in my faculty position as a librarian in academia.

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