ROLE OF ARTIFICIAL INTELLIGENCE IN EDUCATION

Rutvika Deepak Koturwar
Yavatmal

Dr. Deepak Dattarao Koturwar
Principal, Smt. Savitabai Uttamrao Deshmukh Mahavidyalay, Digras Dist. Yavatmal
ddkoturwar@gmaill.com

Abstract
The contribution of computer science (AI) within the field of education has invariably been important. From robotic teaching to the event of an automatic system for answer sheet analysis, AI has invariably helped each the lecturers and also the students. During this research we've got done thorough analysis of the assorted analysis developments that were applied across the world like computer science techniques applied to education sector thus on summarize and highlight the role of AI in teaching and student's analysis. Our study shows that AI is that the backbone of all the information science enabled intelligent tutor systems. These systems helps in developing qualities like self-reflection, responsive deep queries, partitioning conflict statements, generating artistic queries, and choice-making skills.

Introduction:
The concept of AI is about the combination of applications of machine learning, deep learning, algorithm production, and natural language processing. AI is beneficial for organizations and individuals as it can increase efficiency, productivity, save time and effort, and improve overall performance. Despite many benefits, AI has challenges such as data security, confidentiality, and causing unemployment. Overall, AI is permeating more and more areas of our daily lives, and is increasingly being used in professional contexts such as education; healthcare delivery; and marketing. It has become one of the key technological drivers and trends in the 21st century. The present article is organized based on the themes of AI in Education, its application, benefits, challenges, and future opportunities of AI in the education field.

Artificial intelligence is changing the teaching-learning process in education!
Since the origin of the establishment of education, the strategies of teaching and also the bond shared between learners and educators have evolved considerably. Teaching strategies across the world became additional structured to administer higher, additional efficient results. This transformation will be majorly attributed to the continued intervention of technology. On the rear of continuous technological advancement, we tend to square measure witnessing a paradigm shift within the teaching-learning method. The connection between educators and students is dynamical, wherever educators became additional approachable and far higher at understanding their students' views. Technology has created learning additional cooperative, as academics and students square measure operating in bicycle-built-for-two to realize higher outcomes.

Roles of Artificial Intelligence in education:
AI can automate basic activities in education, like grading.
While AI might not ever be ready to actually replace human grading, it's obtaining pretty shut. It's currently potential for academics to alter grading for nearly every kind of multiple alternative and fill-in-the-blank testing and automatic grading of student writing might not be so much behind.

Students could get additional support from AI tutors.
These programs will teach students fundamentals, however up to now aren't ideal for serving to students learn high-order thinking and creative thinking, one thing that real-world lecturers square measure still needed to facilitate. Nonetheless that shouldn't rule out the likelihood of AI tutors having the ability to try to these items within the future.

AI-driven programs can give students and educators helpful feedback.
AI cannot solely facilitate academics and students to craft courses that are bespoke to their wants, however it may give feedback to each concerning the success of the course as an entire. These sorts of AI systems enable students to urge the support they have and for professors to search out areas wherever they'll improve instruction.

It could change the role of teachers.
There will always be a job for teachers in education, but what that role is and what it entails may change because of new technology within the type of intelligent computing systems. As we've already discussed, AI can take over tasks like

grading, can help students improve learning, and should even be a substitute for real-world tutoring.

Data powered by AI can change

How schools find, teach, and support students. Smart data gathering, powered by intelligent computer systems, is already making changes to how colleges interact with prospective and current students. From recruiting to helping students choose the foremost effective courses, intelligent computer systems are helping make every a neighborhood of the faculty experience more closely tailored to student needs &goals.

Benefits of AI in the Education Field

The general benefits of AI such as efficiency and customization also apply to AI in education. The main benefit of AI in education is that it can facilitate learning with greater flexibility and convenience as learners can learn in their own time and space using AI-related infrastructure. Along with flexibility, AI can also enhance accessibility to education as more and more learners can access quality educational resources regardless of their economic background or geographic location. This advantage makes providing universal access to education much easier. AI can also enable tutors to empower their students' AI competencies, attitudes, and readiness to communicate with other learners, solve authentic problems, and develop ideas, theories, and solutions innovatively and collaboratively. Thus, the use of AI in education is resulting in overall improvement of the student's performance. A benefit of AI includes greater support available to students. For example, AI-based assistance to students uses Chatbot and virtual assistants which are based on intelligent systems and can offer round-the-clock availability, address queries, and offer valuable feedback. AI also enables enhanced engagement and motivation of students by providing tools such as gamification of learning or interactive content. It enables students to be more engaged and motivated. AI systems also enable automated grading thus enabling more time available to tutors for lesson planning and preparation.

The automation of assessment is shifting the role of the teacher to a facilitator. Teachers can integrate AI lessons as supplementary materials to assist weak students and provide hands-on experiences in the form of human interaction for students. AI systems also provide students with a judgment-free environment of learning and can suggest solutions to improve students' performance. AI can also reduce the cost borne by educational institutes as it removes unnecessary work and automates processes which reduce the resource requirements. The reduced cost thus can be transferred to other stakeholders such as students. Overall, we can argue that AI use in the education field has benefits for learners, tutors, and educational institutes in terms of flexibility, increased learning, a focus on more important tasks, and increased efficiency.

Conclusion:

The conceptual paper discusses the role of AI in the education field. Our review of previous studies shows that AI in the education field is changing the landscape of education in the domains including course plan, delivery of courses, content creation and distribution, and so on. The application of AI in education delivery is customized and more flexible learning content along with the opportunity to interact with the system. The AI is thus empowering both the teaching staff and the students to become more in control by focusing on more important tasks while leaving the routine repeated simple tasks to the AI system. The key challenges we discussed included ethical issues related to AI in education, lack of human touch, data privacy issues, as well as the cost involved in developing AI systems. Overall, we can conclude that AI is revolutionizing the education field and bringing big changes along with some challenges that need to be addressed properly before real gains can be made. Future Directions In the future, AI based systems such as the role of ChatGPT and similar AI-related tools will play a key role in future education. Therefore, future researchers can focus more specifically on ChatGPT's role in education. Similarly, Hybrid AI is the future direction, which represents joint intelligence from human beings and algorithms. To date, hybrid AI has gained less attention and started to be applied to some realistic applications, such as management. However, most of them are simple combinations of human and AI decisions. The way to better take advantage of humans and algorithms should be explored.

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