



Inclusive, and special education practices enabled by AI systems

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Abstract

Artificial intelligence (AI) refers to the development of computer machines that can perform tasks requiring human intelligence. It involves the development of algorithms and computational models that enable machines to simulate cognitive functions including learning, reasoning, problem solving, perception and language understanding. The scope of AI is vast covering industries like healthcare, finance, education and manufacturing. Special education is one such area which can be revolutionized using AI. Through personalized learning experiences, AI technologies can adapt to individual learning styles, preferences and abilities providing a more inclusive educational environment. AI powered tools can assess students' progress and comprehension levels instantaneously, allowing educators to adjust instructional strategies accordingly.

Artificial intelligence (AI) is a powerful technology that is changing organizations and creating new possibilities worldwide. (Füller et al., 2024). In the context of education, AI holds immense promise as a tool for fostering inclusivity through differentiated teaching (Luckin et al., 2022). By leveraging AI-driven technologies, educators can create personalized learning pathways, deliver real-time feedback, and adapt instructional content to suit individual learners' needs (Holmes et al., 2022). These capabilities not only enhance the learning experience but also promote a more inclusive environment where every student, regardless of their starting point, can thrive (Vanbecelaere et al., 2020). While AI offers promising tools for personalization and inclusion, its implementation is fraught with ethical and practical challenges—including algorithmic bias, digital inequality, and data privacy concerns—which are critically examined in this study.

