



AI EDUCATION AND HEALTH CARE

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Human intelligence is the human ability to comprehend, learn, reason, and navigate novel or challenging situations. Artificial intelligence (AI), on the other hand, is the intelligence of machines which simulate human intelligence into a computer machine so that it can think and act like a human. Unlike human intelligence, which uses the brain, memory and cognitive abilities, AI relies on the data provided by humans. This is one big difference between human intelligence and AI.

In contrast to human intelligence, some other significant features of AI are that it processes information faster, is more accurate, can adapt to change and is highly objective. AI is a branch of computer science, and the term “AI” was coined in 1995 by John McCarthy, an American computer scientist. AI is perceived to be one of the most important technologies of the 21st century that will drive change in the future. Some common examples of AI in our day –to –day life include Google Maps, Google search engine, and spam filters, automatic language translation, Chat GPT, and intelligent digital personal assistants like Siri, Cortana, Alexa, etc.

ARTIFICIAL INTELLIGENCE, MACHINE LEARNING AND DEEP LEARNING.

In the context of artificial intelligence, two other terms often used interchangeably with artificial intelligence are machine learning and deep learning. These three terms are not the same but are interrelated. Machine learning is a subgroup of artificial intelligence which focuses on enabling computers to perform various tasks without explicit programming. On the other hand, deep learning is a subgroup of machine learning which is based on artificial neural networks.

Neurons are tiny messengers in our brain that send and receive messages throughout our body, allowing us to think, feel, move, and interact with the world around us. Artificial neural networks on which deep learning is based mimic how the human brain operates.

How does an AI system work?

AI systems simulate or replicate human cognitive abilities such as perception, reasoning, understanding languages, recognizing voices and images, learning, problem-solving, etc. So the question is, how is an AI system designed, and how does it work?

The AI system to perform various tasks with minimum human intervention, is programmed first to create a knowledge base and then make decisions based on it. The knowledge base stores information consisting of

facts, assumptions and rules that an AI system can use for decision-making. In creating a knowledge base, AI begins with a large amount of data from various sources, including speech, text, image, context and outcomes, which is the lifeblood of AI. The nature of data depends on the nature of the problem and the possible outcome expected from an AI system.

AI systems rely on algorithms and computational models to process and analyses large amounts of data, extracting patterns and making predictions or decisions based on that information. Data, therefore, is the fuel that powers AI innovation and enables an AI system to simulate human intelligence.

An important part of the AI system, especially in the context of education, is the AI-based Learning Management System (LMS). This digital platform incorporates artificial intelligence technologies and helps maximize the management and delivery of educational content and learning experiences.

Natural LANGUAGE PROCESSING (NLP)

It is an area of artificial intelligence concerned with giving machines the ability to interpret written and spoken language similarly to humans. NLP combines computer science, Linguistics, Machine learning and deep learning concepts to help computers analyses unstructured text or voice data and extract relevant information. It is a technology that machines use to understand analyses and interpret human languages; NLP plays an important role in various applications such as chat boats, virtual assistants, speech-to-text, machine transactions, autocorrect and much more.

The predictive typing feature of search engines helps us by suggesting the next word in the sentence while typing keywords and the spell-checking features are examples of Natural Language Processing. Whether in education, healthcare, business, manufacturing, automobiles or finance, data-driven AI is transforming every sector and shaping the future. AI has the potential to revolutionize the way education is imparted. So much is the power of AI that it is going to redefine education in the 21st century. Some of the changes the World is going to witness in the education sector as a result of AI include the following:

Personalized Learning: in education, the concept of personalized learning is slowly gaining popularity and is being perceived as the future of education. The traditional teacher-centric method of teaching, which is linear and like a 'one size first all approach'. Is slowly losing flavor among students and educationists as this cannot meet student's academic needs or fuel a passion for learning. Personalized learning, on the other hand, aims to customize learning for each learner's strengths, needs skills, and interests. Every learner is unique, i.e. has different needs, comprehension rates, learning capacity and different methods of gauging information. Therefore, there is a need for a separate tailor-made learning plan for each learner, which can be made possible with the help of AI.

Personalised Cirriculum