ARTIFICIAL INTELLIGENCE: A BOON WITH CAUTION

Jude Fernandes

Assistant Professor in English

Don Bosco College, Panjim - Goa

Abstract

Artificial Intelligence has garnered significant popularity for its ability to replicate human intelligence and streamline tasks. However, the integration of sophisticated AI systems also raises critical issues like factually inaccurate or biased responses, the potential theft of intellectual property and considerable risks of manipulation. This article comprehensively examines the rapid growth of Artificial Intelligence, its applications across various sectors and impact on the job market. Further, it discusses ethical concerns surrounding its intended purpose and malicious abuse. Finally, it calls for the implementation of measures to harness the benefits of AI, while minimising harm and overcoming its weaknesses.

Key-words: *application, Artificial Intelligence, automation, benefits, concerns, human, misuse*

ARTIFICIAL INTELLIGENCE: A BOON WITH CAUTION

Jude Fernandes

Introduction

The 21st century has witnessed the surge of Artificial Intelligence, thanks to its capacity to redefine possibilities and revolutionise the execution of tasks. This emergence has evoked excitement as well as apprehensions among users. According to an article by Chrystal China, Artificial Intelligence can be defined as 'the convergent fields of computer and data science focused on building machines with human intelligence to perform tasks that would previously have required a human being.' A research paper by N. Patil et al. traces the origins of AI as follows:

AI has a history much longer than is commonly understood, in fields from science and philosophy ranging all the way back to ancient Greece, but its modern iteration owes much to Alan Turing and conference in Dartmouth College in 1956 where the term "Artificial Intelligence" was officially coined and defined by John McCarthy at the time as "the science and engineering of making intelligent machines". (N. Patil et al.)

AI demonstrates significant potential in simulating human intelligence. It can be conceptualised as a virtual assistant at one's disposal. The increasing integration of AI is transforming lifestyles by generating ideas and executing tasks with ease and efficiency. The online and offline worlds share an interdependent relation, and the progression of technology has advanced to a point where its presence is often taken for granted. Therefore, digital literacy is an imperative in this day and age. Artificial Intelligence enhances capabilities, offering considerable advantages to those proficient in its application. While many perceive AI

as a system that generates responses based on prompts, its capabilities extend far beyond this function.

Applications of AI

AI can be applied to a plethora of opportunities across sectors, ranging from employment to entertainment. In the healthcare sector, AI is being developed for tracking activities, diagnosing ailments and even providing surgical assistance. The tourism industry employs chatbots to assist travellers with planning their itinerary, comparing prices of hotels and recommending options. In the economic sector, machine learning is utilized for the analysis of economic trends and prediction of global stock markets.

Stakeholders in academia can seek AI's assistance for preparing notes, managing students' records and offering career guidance. In a TED talk, Sal Khan, the founder and CEO of Khan Academy, cites an example of his student who asked an AI tutor to act as a literary character (Jay Gatsby) and respond to questions from his perspective. The responses were reportedly precise and engaging.

In the industrial sector, AI-enabled devices can refine the processes of manufacturing, distribution, disposal and recycling of products. Smart devices are optimised to the extent of making independent decisions. For example, traffic flow can be synthesised using real-time data, and near-autonomous vehicles offer enhanced capabilities. In the automotive industry, many modern cars are equipped with virtual assistants, ADAS technology and features like collision warning, emergency braking and alerts for distracted drivers. AI can be applied to several more fields like accountancy, aerospace, agriculture, archaeology, and architecture, to name a few.

The relative accuracy of AI can be attributed to its constant collection of information for self-improvement. Every input contributes to a database of preferences and aversions, thereby facilitating the identification of patterns and the establishment of correlations. AI software is programmed to emulate human behaviour in its actions and reactions, exhibiting seemingly autonomous signal transmission and continuous evolution. Similar to an effective learner, AI actively addresses its limitations and strives to pursue advancement.

Yet AI is not new. It has developed by leaps and bounds over the last few decades with a progression of algorithmic development marked by successes and setbacks. AI in its current stage is a result of sustained developmental efforts, often surpassing humans in the ability of solve complex tasks. The operational speed and efficiency of AI can exceed that of even highly competent humans, who are prone to limited subject mastery, fatigue and susceptibility to distraction. AI maintains peak productivity over time and is always accessible. However, despite the allure of AI, caution must be exercised due to concerns regarding its potential misuse.

Concerns Surrounding AI

A primary concern with the popularity of AI is the misappropriation of intellectual property, facilitated by the access to language processors, which increases the possibility of plagiarism. This practice by amateurs and professionals alike is an ethical violation that undermines originality and authenticity. The article '5 Pros and Cons of AI in the Education Sector' by Walden University points out that students may use AI chatbots to paraphrase essays for school or college assignments, while researchers might over-rely on AI in their writing processes. Heavy dependence on AI can impede the development of innovative solutions.

There are AI plagiarism checkers, but these may falsely identify original works as plagiarised.

It is important to acknowledge the inherent artificiality of AI and its limitations in replicating the human element. For instance, automated responses may lack the convincing quality of emotive human communication, potentially resulting in monotonous or unnatural interactions. Although AI systems contain exhaustive information, they may lack awareness of specific cultural contexts relevant to certain user groups, and some responses may be outdated or inappropriate. Future iterations of AI should prioritise enhanced diversity and more detailed outputs.

AI has broadened the scope for artistic expression, enabling users to generate illustrations, logos and scripts using basic commands. However, content can easily be manipulated and circulated for ulterior motives. Hyper-real AI-generated images have blurred the lines between authentic and fabricated media. Misinformation poses the risk of detrimental outcomes, including communal hatred and violence. Vigilance and timely intervention are crucial to maintaining social order. The degree to which AI is granted control is a major concern, particularly regarding potential malfunctions. AI's ability to detect and rectify technical errors must be thoroughly reexamined. Its potential endangerment of human life necessitates the need for accountable frameworks in case of miscalculations or accidents.

Artificial Intelligence comes at a cost, even though basic access in many cases is ostensibly free. While AI tools offer advantages in terms of economy and efficiency, they raise privacy concerns. Users are often required to accept extensive terms and conditions, especially the access to particularly concerning the provision of personal data or access to private information. These data are valuable to advertising entities.

The increasing availability of AI-driven solutions allows for the reallocation of human attention to other tasks. However, the benefits for some may present challenges for others. AI-powered machines are being utilised in various sectors, including proofreading, assembly work, customer service and resource management. The growth of the global population intensifies competition within the job market, and numerous companies are adopting AI to replace human labour. While the initial investment in AI implementation may be substantial, the long-term cost benefits are a motivating factor for this transition, which will inevitably transform the nature of the workforce. The extent to which various professions will be affected by the integration of AI remains to be seen.

Conclusion

Artificial Intelligence presents both benefits and drawbacks, necessitating its judicious application. The evolution of AI and the increasing prevalence of portable devices are evident trends. AI will undergo continuous learning and adaptation at all levels. An approach that embraces technological advancement is essential for progress. Localising AI and simplifying the user interface are necessary to maximise its effectiveness. Any delays or inconsistencies should be promptly identified and addressed. Educational frameworks should prepare both students and teachers for the healthy integration of AI. A positive perspective is conducive to progress, and the ongoing development of AI suggests a dynamic future. All said and done, the immense benefits of AI have contributed to its widespread adoption.

Works Cited

- China, Chrystal R. "Breaking Down the Advantages and Disadvantages of AI." IBM, 10 Jan. 2024, www.ibm.com/think/insights/artificial-intelligence-advantages-disadvantages

- Khan, Sal. "How AI Could Save (Not Destroy) Education." YouTube, uploaded by TED, 1 May 2023, http://www.youtube.com/watch?v=hJP5GqnTrNo

- Patil, N., et al. "Artificial Intelligence and its Applications." Journal of Advanced Zoology, vol. 44, no. S-8, ISSN: 0253-7214, 2024, pp. 229-38. https://www.researchgate.net/publication/377897946_Research_Paper_On_Artificial_Intelligence_And_Its_Applications

- Walden University. "5 Pros and Cons of AI in the Education Sector." Walden University, 2 Apr. 2025, https://www.waldenu.edu/programs/education/resource/five-pros-and-cons-of-ai-in-the-education-sector