Chapter 8
The Transformation of Human Existence Through the Integration of Artificial Intelligence

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ABSTRACT

Technology is undoubtedly reshaping our global landscape. Existing are robots that possess human-like speech, appearance, and attire, readily serving us in restaurants. The prevalence of such instances provides ample proof. The field of digital art is witnessing a surge in creations by artists utilizing artificial intelligence (A.I). The inclination towards improving cognitive abilities is apparent in the ongoing development of smartphones and smartwatches. Artificial intelligence is causing a revolution in the way businesses operate. How enterprises engage with their customers, employees, and stakeholders is transforming due to A.I.'s ability to automate tasks, derive insights from data, and craft personalized interactions. A.I. enhances human intelligence, streamlines processes, and makes work more productive and efficient.

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1. INTRODUCTION

A burgeoning technology garnering significant attention is artificial intelligence (AI). It is characterized as the capacity of a computer or robot, guided by computer programming, to execute tasks typically conducted by humans, encompassing intelligence and decision-making akin to human capabilities (Copeland, 2022). AI is an encompassing term that encompasses diverse academic fields, such as computer science, business, engineering, biology, psychology, mathematics, statistics, logic, philosophy, and linguistics. The field is noteworthy and a subject of discussion due to its capabilities and intricacies (Siau, 2018). The rapid global advancement of artificial intelligence (A.I.) has introduced diverse possibilities, ranging from simplifying medical diagnoses and enhancing human interactions through social media to automating tasks and reducing labour costs. However, these swift developments also raise significant ethical concerns.

Regarding people, AITs are growing capable of carrying out more tasks than possible with technology. They are getting better at controlling, facilitating, collaborating with, or even taking the place of humans in work processes. In terms of surveillance, AITs possess the ability to monitor and communicate human behaviour, notifying other AITs and individuals when specific situations arise. This enables us to make possible impractical could have been more practical, attainable only by human resources. With annual investments totalling billions of dollars in A.I. products and services by companies, major tech players such as Google, Apple, Microsoft, and Amazon are dedicating substantial funds to develop these offerings. At the same time, educational institutions are increasingly incorporating AI more prominently into their academic programs, while the U.S. Department of Defense is strengthening its emphasis on enhancing AI capabilities. This convergence of efforts suggests that significant developments in the A.I. landscape are inevitable (Mike Thomas). Co-execution involves employing operational systems collaboratively with humans in a shared environment. It entails incorporating techniques within a working system to replace human activities.

These problems stem from the potential for A.I. systems to introduce biases, contribute to climate change, pose risks to human rights, and raise other related concerns. These AI-related worries have already worsened pre-existing inequalities, further disadvantaging vulnerable populations. Artificial intelligence in education has recently come under the general public's attention as "adaptive products" have become more widely available. Until then, it had only been an academic community with a tiny user base. Therefore, no one had ever asked for an ethical concern. (Holmes et al., 2021; Buckingham Shum)

The incorporation of artificial intelligence into automated decision-making and predictive analytics, along with advancements in sensor technology and robotics, is expected to transform how individuals, communities, governments, and private entities understand and address climate and ecological changes. Various fields studying climate change and environmental monitoring already incorporate various forms of artificial intelligence. Funding for implementing these technologies in forestry, agriculture, and marine resource utilization is increasing rapidly. More than any other factor, technology shapes our world, generating wealth, influencing our economy, and fundamentally shaping our existence, as emphasized by W. Brian Arthur.

Today's interconnected solid global networks have given rise to highly interdependent systems that are difficult for us to comprehend and effectively manage. Even in the absence of external shocks, these systems are vulnerable to failure at various levels, presenting significant dangers to civilization. Even when decision-makers are highly skilled, have access to all pertinent data and technology, and exert their utmost efforts, artificial systems can become unstable and give rise to uncontrollable situations as the