

Chapter 13

Ethical Issues of Artificial Intelligence (AI): Strategic Solutions


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ABSTRACT

Ethical issues of AI have become a huge concern dominating government, media, and academic discourse. This chapter sheds light on some of the most pressing ethical issues that result from the adoption of AI-powered tools. Increasing inequality, widening social and economic gaps, compromising privacy and data protection, outsmarting humans and impacting human rights, lack of accountability, liability and reliability, and lack of empathy and sympathy are considered the most pressing challenges that need to be addressed concerning AI and big data. This chapter also provides insight into strategies that are currently in place to overcome adverse implications of AI in the public and private sectors. Providing insight into these ethical challenges along with the governing solutions makes a significant contribution to the ongoing discourse and urges for bringing forth sustainable solutions that are necessary for the ethical application of these technologies in different fields.

DOI: 10.4018/978-1-6684-9591-9.ch013

INTRODUCTION

The term Artificial intelligence (AI) is utilized to describe information systems that allow machines or software to endow the intellectual processes of human behaviors (Nilsson, 2014). Since its inception, AI has demonstrated the power of programming data-driven digital technologies to perform activities that used to be solely associated with intelligent human beings (Quach et al., 2022), such as problem-solving, decision making, drawing generalizations, communication, perception of meaning, and reasoning (Ayoko, 2021; Balajee, 2020). Organizations have continued to embrace the adoption of AI technologies for their accelerated progress in algorithms, the internet, interconnectedness, and big data storage (Ayoko, 2021; Hanelt et al., 2021).

Recent developments of AI have embraced a computerized system allowing the formation of patterns in algorithms data called, Machine Learning (ML) (Katznelson & Gerke, 2021). This technology has further enhanced AI's abilities to predict outcomes and form correlations. Various industries, including healthcare, production, manufacturing, autonomous vehicles, smart homes, social media, agriculture, and farming have become highly dependent on AI technologies in their operations. The ability of AI to analyze large amounts of data and perform data mining and computation of data processes in a timely and efficient manner could exceed the analytical abilities of human knowledge (Ayoko, 2021). Such efficiency, in turn, enhances and accelerates the generation of insights and optimization of choices which have revolutionized the internal operations and processes of organizations (Ayoko, 2021; Kretschmer & Khashabi, 2020; Magistretti, Pham, & Dell'Era, 2021; Stahl et al., 2022).

The digitalization provided by AI tools assists organizations in radically improving their efficiency and effectiveness in the way they organize resources and make strategic operational decisions (Hasan et al., 2021a; Hasan et al., 2021b; Nguyen et al., 2021), which in turn contribute to improving their productivity and competitiveness (Ayoko, 2021, Ruiz-Real et al., 2021). For instance, the application of AI technology has transformed the medical system by facilitating and speeding up processes, allowing timely storage, analysis and retrieval of data, and providing access to health professionals and organizations (Ayoko, 2021; Farhud & Zokaei, 2021). Over 160 health AI devices have been adopted by the United States Food and Drug Administration with the potential to exceed this number in the near future by furthering the number of products under development (Katznelson & Gerke, 2021). These devices have eased the processes of providing imaging and electronic medical records (EMR), laboratory diagnosis, treatment, new drug discovery, and preventive and precision medicine (Ayoko, 2021; Farhud & Zokaei, 2021; Katznelson & Gerke, 2021). Most recently, AI has played a pivotal role in the containment of the COVID-19 pandemic in the public sphere by allowing the identification, tracking, and forecasting of breakout locations through analyzing news reports, social media platforms and government documents (Ayoko, 2021; Pillai & Kumar, 2021). Improving efficiencies, in general, is regarded as an important contributor to an uplift in the economy in various sectors (European Commission, 2020; Stahl et al., 2022), and reducing environmental damage arising from inefficiencies of production.

On the one hand, the benefits that AI technologies offer to the development of various fields have led to an annual investment of more than \$25 billion to further enhance its capabilities (Bughin et al., 2017; McGregor & Banifatemi, 2018). However, this vast investment could potentially lead to prioritizing financial returns while compromising the potential harm that AI could bring to societies (McGregor & Banifatemi, 2018). On the other hand, ethical issues of AI have become a huge concern that dominates government, media, and academic discourses in recent years.

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