

Chapter 9

Introduction to Artificial Intelligence and Its Importance in Modern Business Management

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ABSTRACT

Artificial Intelligence (AI) has emerged as a groundbreaking technology offering unparalleled opportunities to enhance business efficiency and competitiveness. Recently, AI has gained notable attention in the business world as companies have started to recognize the potential of AI to revolutionize businesses and unlock new opportunities for growth and innovation. This chapter provides an introduction to AI and its importance in modern business management. It discusses the origin, evolution, and different types of AI; and subsequently delves into the applications, benefits, challenges, and future of AI. The chapter concludes that an ethical global governance framework should be developed for frontier AI applications used in businesses to make them more reliable and trustworthy. Also, there should be government intervention in the form of ethical auditing and ethical guidelines for the use of AI by the organizations. Thus, with the right approach, AI can be a valuable asset to businesses, helping them to succeed in an increasingly competitive and turbulent business environment.

1. INTRODUCTION

Artificial Intelligence (AI) is more than just a buzzword; it has become an integral part of the modern business landscape. The emergence of AI-driven automation has streamlined operations, enhanced efficiency, and freed human resources to focus on the core and creative spheres of work. By facilitating easier and faster data analysis, and providing valuable insights, AI has empowered decision-makers to make informed choices, driving innovation and improving overall business performance.

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Furthermore, there is a significant impact of AI on customer experience and marketing strategies. AI-powered “virtual personal assistants” like “Apple’s Siri, Amazon’s Alexa, and Google Assistant”; chat-bots; and personalized recommendations have revolutionized customer engagement, leading to higher satisfaction rates and increased customer loyalty. AI’s ability to analyze consumer behavior has enabled businesses to tailor marketing efforts to effectively meet consumer expectations (Srivastava, 2023).

However, it’s immensely important to discuss the ethical implications of adopting AI in business management. With the increasing emphasis on AI, it is of paramount importance to implement transparent and responsible AI governance, ensuring fairness, accountability, transparency, and data privacy and security (Hassan, et al, 2023). Striking a balance between human expertise and AI capabilities is crucial to foster a symbiotic relationship that leverages the strengths of both, enabling businesses to achieve sustainable growth and success (Jarrahi, Monahan & Leonardi, 2023).

The role of AI in managing businesses in the coming years is undeniably promising. As technology continues to evolve, AI is expected to play a pivotal role in enhancing efficiency, enabling innovation, and driving customer-centric approaches. Organizations that embrace AI strategically and responsibly will be better equipped to thrive in a highly competitive and dynamic business landscape in the VUCA (volatile, uncertain, complex and ambiguous) world and BANI (brittle, anxious, nonlinear and incomprehensible) world (Martins & Chagas, 2021).

AI is not just a trend but a quintessential transformative force that can revolutionize businesses across industries, making them more agile, data-driven, and customer-focused. By embracing AI with an ethical and strategic mindset, businesses can navigate the challenges and opportunities presented by AI, leading them towards sustainable growth and success in the ever-changing and evolving global market. AI has, thus, become an indispensable part of our lives, revolutionizing various industries, including business management.

This chapter explores the meaning and fundamental concepts of AI, its evolution and historical development, and its various types, exhaustively. The chapter intricately discusses its importance in modern business management and its impact on the same alongwith its applications in modern business management and other fields, emphasizing its transformative potential in shaping the future of organizations. The chapter also throws some light on scaling AI for business. Further, the chapter spells out the benefits of AI in modern business management, and the challenges and ethical considerations in AI-driven business management. The chapter then gives a detailed account of future of AI, discussing the various trends in the development of AI. The chapter gives a comprehensive summary and conclusion at the end which explains the key takeaways from the study.

2. DEFINITION AND CONCEPT OF AI

Artificial Intelligence (AI) refers to “the simulation of human intelligence in machines that are programmed to mimic cognitive functions” such as thinking, learning, reasoning, and other such similar tasks which require human intelligence. Johnson (2023) opined that “AI is a large science that mimics human aptitudes”. It refers to “the development of intelligent machines that can imitate human intelligence and perform tasks that would typically require human cognition” (Johnson, 2023). These machines possess “the ability to perceive reason, learn, and make decisions based on data inputs”.

AI covers a broad range of techniques, such as, “machine learning, deep learning, reinforcement learning, natural language processing, computer vision, robotics, and expert systems”, among others.

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