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“The Future of Artificial Intelligence”

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Abstract

It is crucial for people, corporations, and governments to remain well informed on the current capabilities of AI to make important future decisions on its direction and capabilities. This article examines the future of artificial intelligence by examining the current strengths, weaknesses, and ethical concerns. The impact AI has made in marketing, operations management, human resources, data security, and the environment are examined.

Introduction

Artificial Intelligence (AI) is defined as a computerized brain complex enough to supplement a human brain. Since its introduction, AI has rapidly revolutionized every industry it has touched, from academia to military. The future of AI is much more important than the impact it has already made. People, businesses, and nations are rapidly approaching the most important forks in the road, where one misstep can ruin lives, destroy corporate reputation and profits, and topple the most powerful nations. Everyone has a duty to stay informed on AI and ensure society stays on the correct course. The first step to be informed about AI is to examine the positive impacts, key drawbacks, and ethical crossroads. The positive impacts of AI are demonstrated in its use in marketing and operations management. The key drawbacks are in Human resources, a byproduct of AI Bias. The important ethical considerations that must be approached carefully are data security and the environmental impact of AI. How humanity utilizes AI in these six key areas will have an impact on the future of AI.

Pro: Marketing

Artificial intelligence in marketing has allowed marketers and sales representatives to use vast sums of data to make more personalized advertisements and increase consumer engagement. Companies using AI for marketing emails and communications have witnessed a 28% increase in email open rates and 34% increase in conversion rates (Kujore et al., 2025). Compared to generic marketing, where advertisements are constant, AI can create personalized marketing, which leads to the increased interactions and more sales for business. Additionally, artificial intelligence can create content with higher efficiency compared to traditional methods. It is a fact that AI can operate quickly on a large scale, and ecommerce companies have seen vast improvements in efficiency, ranging from 400% to 600% (Kujore et al., 2025). These rates cement AI's place in

marketing, since these numbers are attractive for businesses and investors to increase sales and profit margins. From a business standpoint, it is an obvious move to implement Artificial Intelligence in marketing for the future, and AI will make a positive future impact in this field for companies and investors.

Pro: Operations Management

Operations management relates to the day-to-day operations of businesses, such as production planning, quality control, transportation, and maintenance. AI allows these processes to be automated, allowing them to happen faster and higher quality. One great example of AI in operations management is Skywise, a collaboration between Airbus and Palantir where artificial intelligence is used for predictive maintenance of airplanes. Airlines such as Delta, JetBlue, and Emirates use Skywise for the value AI adds to operation management. For example, Delta has observed a 15% reduction in operational interruptions with their aircraft fleet (Airbus, 2021). This is because AI can take data from hundreds of planes, such as maintenance records and average wear and tear of parts, to predict when aircraft will need maintenance and schedule maintenance. Using artificial intelligence in this way is beneficial outside of the aviation industry as well. The future of AI and operation management means increased reliability for larger companies and less delays for people who depend on those companies.

Con: Human Resources & AI Bias

While Artificial Intelligence has many upsides, there are a significant number of quirks that must be addressed before AI can further expand into more fields. One of the largest shortcomings of AI is brought up in human resources, where AI bias begins to show. One famous case of this is Amazon's attempted human resources bot that backfired, realizing the resume screening bot had gender bias. This is because AI bots are typically trained on previous data. In this case, since most applicants for tech industry jobs are male, the AI taught itself that males were preferred, since there are few females in the industry. (Dastin, 2018). There was bias against resumes "that included the word 'women's' as in 'women's chess club captain.' And it downgraded graduates of two all-women's colleges" (Dastin, 2018). This led to backlash against Amazon, and the program was shut down.

Bias in AI is a legitimate problem for people, business, and investors. Bias can reduce trust and reputation, leaving a negative mark where it goes. Two of the larger examples of this are job searches and AI Video interviews. Regarding job searches, it was determined that jobs paying over a $200,000 salary are advertised 5.82 times more to men than women (Sekiri, 2025). This means for every 6 high paying jobs advertised to men, women would only see one of those. This reinforces AI was trained on discriminatory data, which (intentionally or unintentionally) plagues current AI systems. This data is shown on Interviews as well, since some companies

This is an important consideration for the future of AI, especially since "55 percent of U.S. human resources managers said artificial intelligence would be a regular part of their work within the next five years" (Dastin, 2018). With the level of integration HR managers want with AI, its bias must be addressed before it leaves larger scars on companies and people.

Ethics: Data Security

Research has shown that the number of executives that value the importance of AI ethics has jumped from 50% to 75% over the past years (Conrad 2024). One ethical concern is the impact of AI on data security. Artificial intelligence has the capacity to both greatly enhance data security and destroy it. While data security companies try to build up their defense systems, others use AI to send thousands of phishing emails at once (Guan, 2025). Compounded with reports that 38% of employees admitting to submitting confidential information to AI models (French, 2024), the image of a data security nightmare is painted. Companies must mitigate these risks in the future and have extra security when it comes to what information to provide artificial intelligence. Missteps in this area can result in data breaches, identity theft, and lawsuits that destroy company reputation and investor confidence. The future of AI must have safeguards in place to prevent this.

Ethics: Environmental Impact

AI sustainability has been in the spotlight in recent months regarding its energy and water use to train and cool data centers where AI models are housed. For example, data, (Midhat Tilawat, 2025) shows an energy jump from "approximately 415 TWh in 2024 to 945 TWh by 2030, more than doubling in just six years." On top of this, these large data centers "consume vast amounts of water" (Litvinets & Pijselman, 2024) to cool down their data hubs and servers. If these go

unchecked, there is a higher likelihood of energy shortages and droughts. Regulators and planners must be more conscious about energy and water use to sustain a future beneficial for everyone.

Summary

There is only one genuine certainty in the future, that artificial intelligence will be in it. Artificial intelligence will have a positive impact on many strategic fields such as operations management and sales, where its data processing and number crunching abilities can thrive. However, there are still shortcomings in less numerical fields such as human resources where AI will have bias because of current and historic data that has gender and racial bias. Ethical concerns must be considered as well, such as data security and the environment, to ensure we protect ourselves and the planet.

People, companies, and governments are quickly approaching important forks in the road. Essential decisions that will change the course of history will be made, and there is no doubt history books will look at these years with a close eye. It is essential for all of us to stay informed on artificial intelligence so we can make the best decisions about the future of artificial intelligence.

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