



Review: Artificial Intelligence and the Future of Humans Evolution

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Abstract

Artificial Intelligence (AI) is swiftly reshaping our lifestyles and professional landscapes, generating a mix of intrigue and apprehension about its prospective impact on human destiny. AI's potential for addressing global predicaments, spanning healthcare, climate transformation, transportation, and education, is undeniably vast. However, alongside its promise, legitimate apprehensions emerge regarding potential hazards like job dislocation, algorithmic bias, and potential misuse of AI capabilities. As AI's evolution persists, it becomes imperative to critically assess its ethical, societal, and economic dimensions. This abstract provides a succinct overview of AI's role in shaping humanity's future, spotlighting pivotal concerns and challenges that necessitate consideration to ensure AI serves the collective betterment of society.

Keywords: *AI, CV, Medical, healthcare, economic*

1.Introduction

Artificial Intelligence (AI) has orchestrated a profound transformation across our world, steering innovations like self-driving cars and virtual assistants. Its ramifications for the future of humanity spark both intense intrigue and rightful concern. As AI advances and becomes ubiquitous, the landscape is adorned with opportunities and challenges [1-5]. On one hand, AI possesses the power to confront the world's most pressing dilemmas - from healthcare and climate change to transportation and education. Conversely, apprehensions are rooted in the potential pitfalls of AI, spanning job displacement, algorithmic bias, and the specter of misuse. As AI continues its evolutionary sprint, the imperative of scrutinizing its ethical, societal, and economic implications intensifies. Within this context, this article embarks on an exploration of AI's role in shaping humanity's trajectory, spotlighting pivotal concerns and hurdles that warrant redress for the common good [6-14] [15]. AI extends its embrace for societal betterment across various domains, spanning healthcare, education, sustainability, disaster response, and social justice. A cascade of examples unfurls:

Healthcare: AI elevates healthcare standards by fortifying disease diagnosis and treatment. AI-powered medical imaging augments early-stage disease detection, ushering in better outcomes through prompt intervention.

Education: AI tailors' education, personalizing learning journeys. Adaptive learning platforms leverage AI algorithms to analyze student progress, proffering tailored feedback for enhanced learning.

Environmental Sustainability: AI orchestrates environmental vigilance, processing copious sensor data. The result is preemptive detection and mitigation of ecological disasters like oil spills and forest fires.

Disaster Response: AI assumes a pivotal role in disaster response. AI-driven drones surveil affected areas, while AI-infused chatbots disseminate information and support to afflicted populations [12-16][17].

Social Justice: AI emerges as an agent of social equity. It detects and precludes biases in areas like hiring, as AI-powered chatbots extend legal aid to those who cannot afford representation [18-20].

AI's potential to ameliorate society reverberates in sectors spanning healthcare, education, sustainability, disaster response, and social justice. Nevertheless, the trajectory must adhere to ethics and responsibility, striking a balance between benefits and risks [21-25].

2.Related Works

The reverberations of Artificial Intelligence (AI) on humanity's forthcoming trajectory have stirred considerable intrigue and research in recent times. Numerous scholars have delved into the realm of AI's conceivable advantages and perils, while also delving into the ethical and societal reverberations underlying its evolution and implementation.

A seminal contribution in this field is the report "Artificial Intelligence and Life in 2030," a product of the Stanford University One Hundred Year Study on Artificial Intelligence (AI100). This comprehensive report dissects the potential ramifications of AI across diverse spheres of existence, encompassing healthcare, education, security, and employment. Emphasizing the significance of ethical and policy frameworks, the report underscores the necessity of navigational guides for AI's development and deployment.

Philosopher Nick Bostrom's book "Superintelligence: Paths, Dangers, Strategies" represents another notable work in this domain. This opus explores the latent risks and conundrums engendered by the advent of superintelligent AI—a realm where AI could potentially surpass human intelligence and cast existential threats upon humanity. Furthering the discourse, several researchers have delved into AI's latent benefits in varying domains. For instance, cardiologist Eric Topol's tome "Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again" examines AI's transformative potential in the healthcare realm, envisaging improved diagnosis, treatment, and patient outcomes [26-30].

A burgeoning corpus of research converges on AI's influence on humanity's impending trajectory, shedding light on both its possibilities and the challenges it ushers forth. This academic pursuit is instrumental in orchestrating AI's responsible and ethical development and deployment, poised to harness its benefits and curtail its risks.

3. Proposed Work

The objective of the proposed endeavor is to delve into the ethical and societal ramifications of Artificial Intelligence (AI) as a catalyst in shaping the trajectory of humanity. This undertaking encompasses a comprehensive synthesis of existing literature pertaining to this theme, alongside original research endeavors addressing pivotal voids and complexities within this realm [31-33]. The core objectives of this proposed venture encompass the following:

Identification of Ethical and Societal Implications: Through a meticulous analysis, this work seeks to unearth the ethical and societal ripples propagated by AI across diverse landscapes, including healthcare, education, sustainability, and social justice.

Balancing Benefits and Risks: Delving into the potential gains and hazards of AI, the study endeavors to fathom effective strategies for their management and mitigation.

Impact on Human Values: By scrutinizing AI's influence, the work aims to elucidate the resonance of AI with human values like autonomy, privacy, and dignity.

Guidelines for Responsible AI: The proposed work aspires to distill comprehensive guidelines and recommendations that steer the conscientious evolution and deployment of AI, intricately interweaving ethical and societal considerations.

Employing a blended methodology encompassing literature reviews, case studies, and surveys, the work will encapsulate a multifaceted lens for data collection and analysis. This pursuit will be fortified by collaborations with specialists spanning AI, ethics, and social sciences, fostering a holistic and interdisciplinary approach.

The anticipated outcomes are as follows:

A holistic grasp of the ethical and societal nuances inherent in AI's role in shaping humanity's future.

A compendium of guidelines and recommendations that chart a responsible course for AI's evolution in diverse arenas.

Insights into AI's sway over human values and its potential to augment or hinder human flourishing.

A substantial contribution to the ongoing discourse encircling AI's place in humanity's trajectory, advocating for ethical and responsible AI development. The proposed endeavor seeks to enrich the emergent sphere of AI ethics, while proffering sagacity and guidance for the ethical and conscientious advancement and implementation of AI across multifarious domains [34].

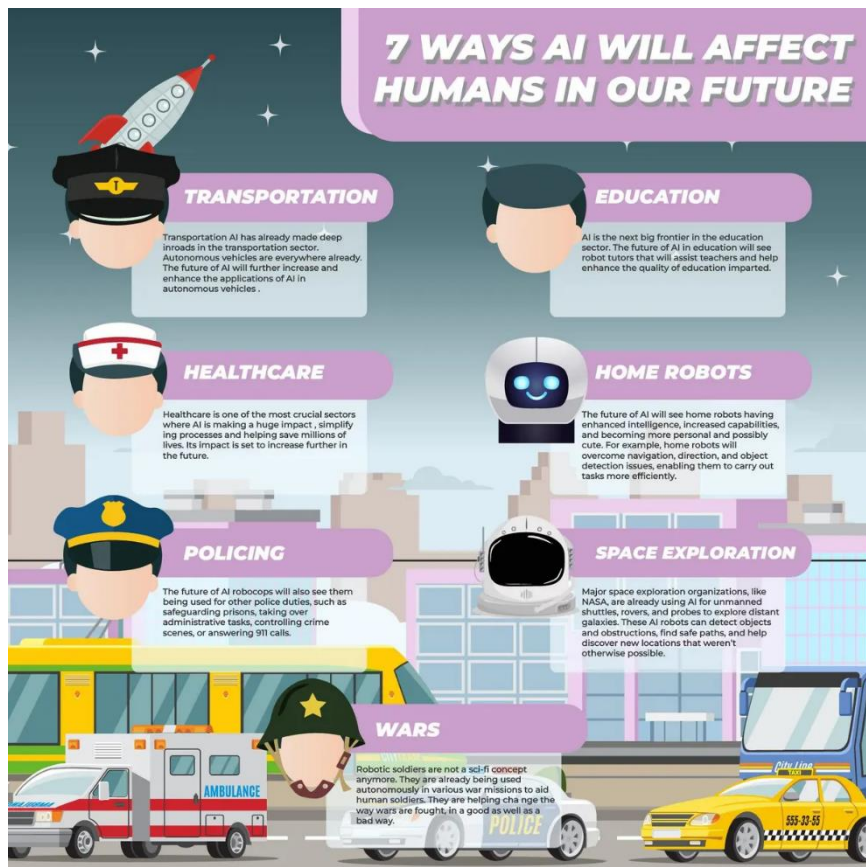


Figure 1: AI and the future of Humanity

5. Conclusion

The realm of Artificial Intelligence (AI) is undergoing a transformative overhaul of our world, eliciting profound interest and concern regarding its imprint on humanity's future. The potential of AI to address the world's most pressing quandaries - from healthcare and education to sustainability and disaster response - is undeniably formidable. However, it is equally valid to acknowledge the apprehensions stemming from AI's attendant risks and challenges, encompassing job displacement, algorithmic bias, and the potential for misuse. With the velocity of AI's technological progress and deployment amplifying, it becomes paramount to navigate the ethical, societal, and economic dimensions of this innovation. The onus lies on cultivating the ethical and responsible development and implementation of AI, underpinned by an unwavering commitment to magnify its advantages while tempering its perils. This necessitates a confluence of perspectives from diverse stakeholders - researchers, policymakers, industry leaders, and civil society entities. The choices we make today regarding AI's development and deployment will indelibly sculpt humanity's trajectory. By judiciously harnessing AI's capabilities, we can usher in a world that is more equitable, sustainable, and prosperous for all. However, this requires a steadfast dedication to ethically and responsibly advancing AI, grounded in a deep appreciation for human values and dignity in AI's design and execution. In summation, AI's potency as a force for positive transformation is undeniable, contingent on our vigilant alignment of its evolution and application with our shared societal principles and aspirations. Through collective collaboration, we can wield AI's potential to forge an improved and inclusive future for all.

References

- [1] Anderson, Janna, Lee Rainie, and Alex Luchsinger. "Artificial intelligence and the future of humans." Pew Research Center 10.12 (2018).
- [2] Wang, Weiyu, and Keng Siau. "Artificial intelligence, machine learning, automation, robotics, future of work and future of humanity: A review and research agenda." *Journal of Database Management (JDM)* 30.1 (2019): 61–79.
- [3] Hassan, Esraa, et al. "The effect of choosing optimizer algorithms to improve computer vision tasks: a comparative study." *Multimedia Tools and Applications* (2022): 1-43.
- [4] Vuppalapati, Chandrasekar. *Democratization of Artificial Intelligence for the Future of Humanity*. CRC Press, 2021.
- [5] Hassan, Esraa, et al. "COVID-19 diagnosis-based deep learning approaches for COVIDx dataset: A preliminary survey." *Artificial Intelligence for Disease Diagnosis and Prognosis in Smart Healthcare* (2023): 107.
- [6] Jarrahi, Mohammad Hossein. "Artificial intelligence and the future of work: Human-AI symbiosis in organizational decision making." *Business horizons* 61.4 (2018): 577–586.
- [7] Minsky, Marvin. *The emotion machine: Commonsense thinking, artificial intelligence, and the future of the human mind*. Simon and Schuster, 2007.
- [8] Hassan E, El-Rashidy N, Talaat FM (2022) Review: Mask R-CNN Models. <https://doi.org/10.21608/njccs.2022.280047>.
- [9] Müller, Vincent C., and Nick Bostrom. "Future progress in artificial intelligence: A survey of expert opinion." *Fundamental issues of artificial intelligence* (2016): 555–572.
- [10] Miller, Anthony. "The intrinsically linked future for human and Artificial Intelligence interaction." *Journal of Big Data* 6.1 (2019): 38.

- [11] E. Hassan, M. Y. Shams, N. A. Hikal and S. Elmougy, "A novel convolutional neural network model for malaria cell images classification," *Computers, Materials & Continua*, vol. 72, no. 3, pp. 5889–5907, 2022.
- [12] Livingston, Steven, and Mathias Risse. "The future impact of artificial intelligence on humans and human rights." *Ethics & international affairs* 33.2 (2019): 141–158.
- [13] Panesar, Sandip, et al. "Artificial intelligence and the future of surgical robotics." *Annals of surgery* 270.2 (2019): 223–226.
- [14] Talaat, Fatma M., and Esraa Hassan. "Artificial Intelligence in 3D Printing." *Enabling Machine Learning Applications in Data Science: Proceedings of Arab Conference for Emerging Technologies 2020*. Springer Singapore, 2021.
- [15] Mohammad, Suleiman Jamal, et al. "How artificial intelligence changes the future of accounting industry." *International Journal of Economics and Business Administration* 8.3 (2020): 478–488.
- [16] Hassan, E.; Elmougy, S.; Ibraheem, M.R.; Hossain, M.S.; AlMutib, K.; Ghoneim, A.; AlQahtani, S.A.; Talaat, F.M. Enhanced Deep Learning Model for Classification of Retinal Optical Coherence Tomography Images. *Sensors* 2023, 23, 5393. <https://doi.org/10.3390/s23125393>
- [17] Kumar, Narendra, et al. "Ethical aspects and future of artificial intelligence." 2016 International Conference on Innovation and Challenges in Cyber Security (ICICCS-INBUSH). IEEE, 2016.
- [18] Spelda, Petr, and Vit Stritecky. "The future of human-artificial intelligence nexus and its environmental costs." *Futures* 117 (2020): 102531.
- [19] Gamel, S.A., Hassan, E., El-Rashidy, N. et al. Exploring the effects of pandemics on transportation through correlations and deep learning techniques. *Multimed Tools Appl* (2023). <https://doi.org/10.1007/s11042-023-15803-1>
- [20] Tahaei, Mohammad, et al. "Human-Centered Responsible Artificial Intelligence: Current & Future Trends." *Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems*. 2023.
- [21] Thacker, Jason. *The Age of AI: Artificial Intelligence and the Future of Humanity*. Zondervan, 2020.
- [22] McKnight, Lucinda. "Electric sheep? Humans, robots, artificial intelligence, and the future of writing." *Changing English* 28.4 (2021): 442–455.
- [23] Kaplan, Andreas, and Michael Haenlein. "Rulers of the world, unite! The challenges and opportunities of artificial intelligence." *Business Horizons* 63.1 (2020): 37–50.
- [24] Noorbakhsh-Sabet, Nariman, et al. "Artificial intelligence transforms the future of health care." *The American journal of medicine* 132.7 (2019): 795–801.
- [25] Shabbir, Jahanzaib, and Tarique Anwer. "Artificial intelligence and its role in near future." *arXiv preprint arXiv:1804.01396* (2018).
- [26] Hassan, Esraa, et al. "Breast Cancer Detection: A Survey." *Artificial Intelligence for Disease Diagnosis and Prognosis in Smart Healthcare*. CRC Press, 2023. 169-176.
- [27] Bhattacharya, Sudip. "Artificial intelligence, human intelligence, and the future of public health." *AIMS Public Health* 9.4 (2022): 644.
- [28] Dhar, Vasant. "The future of artificial intelligence." *Big Data* 4.1 (2016): 5–9.

- [29] E. Hassan, M. Shams, N. A. Hikal, and S. Elmougy, "Plant Seedlings Classification using Transfer," no. July, pp. 3–4., Conference: 2021 International Conference on Electronic Engineering (ICEEM), DOI:10.1109/ICEEM52022.2021.9480654
- [30] Blease, Charlotte, et al. "Artificial intelligence and the future of primary care: exploratory qualitative study of UK general practitioners' views." *Journal of medical Internet research* 21.3 (2019): e12802.
- [31] Rathi, R. A. "Artificial intelligence and the future of hr practices." *International Journal of Applied Research* 4.6 (2018): 113–116.
- [32] McKamey, Mark. "Legal technology: Artificial intelligence and the future of law practice." *Appeal: Rev. Current L. & L. Reform* 22 (2017): 45.
- [33] Elmuogy, S.; Hikal, N.A.; Hassan, E. An efficient technique for CT scan images classification of COVID-19. *J. Intell. Fuzzy Syst.* 2021, 40, 5225–5238
- [34] Sako, Mari. "Artificial intelligence and the future of professional work." *Communications of the ACM* 63.4 (2020): 25–27.
- [35] Hassan, Esraa, et al. "Robust Deep Learning Model for Black Fungus Detection Based on Gabor Filter and Transfer Learning." *Computer Systems Science & Engineering* 47.2 (2023).
- [36] Radanliev, Petar, et al. "Forecasts on future evolution of artificial intelligence and intelligent systems." *IEEE Access* 10 (2022): 45280–45288.