EasyChair Preprint

№ 10658

Artificial Intelligence and the Future of Humans

Amira Ahmed

August 2, 2023

Artificial Intelligence and the Future of Humans

Amira Ahmed
[1]*Student at Faculty of Computer Science Artificial Intelligence, Egypt.*

Abstract

Artificial Intelligence (AI) is rapidly changing the way we live and work, and its impact on the future of humanity is a topic of significant interest and concern. AI holds immense potential to help us solve some of the world's most pressing problems, from healthcare and climate change to transportation and education. However, there are also valid concerns about the risks and challenges posed by AI, including job displacement, algorithmic bias, and the potential for AI to be misused. As AI technology continues to advance, it is essential that we consider the ethical, societal, and economic implications of its development and deployment. This abstract provides a brief overview of the role of AI in shaping the future of humanity and highlights some of the key issues and challenges that we need to address to ensure that AI is leveraged for the greater good of society.

Keywords: *Artificial Intelligence, healthcare, economic*

1.Introduction

Artificial Intelligence (AI) has been transforming the world we live in, from self-driving cars to virtual assistants, and its impact on the future of humanity is a topic of significant interest and concern. AI is becoming more advanced and ubiquitous, and there are both opportunities and challenges that come with this technology [1-5]. On the one hand, AI holds immense potential to help us solve some of the world's most pressing problems, from healthcare and climate change to transportation and education. On the other hand, there are concerns about the risks and challenges posed by AI, including job displacement, algorithmic bias, and the potential for AI to be misused. As AI technology continues to advance, it is essential that we consider the ethical, societal, and economic implications of its development and deployment. In this context, this article provides an overview of the role of AI in shaping the future of humanity and highlights some of the key issues and challenges that we need to address to ensure that AI is leveraged for the greater good of society [6-14] [15]. AI is being used for the greater good in a wide range of fields, from healthcare and education to sustainability and disaster response. Here are some examples:

1. Healthcare: AI is being used to improve healthcare outcomes by aiding in the diagnosis and treatment of diseases. For example, AI-powered medical imaging systems can help doctors detect early-stage cancer and other diseases with greater accuracy, which can lead to earlier treatment and better outcomes for patients.

2. Education: AI is being used to personalize and improve education for students. For example, adaptive learning platforms can use AI algorithms to analyze student performance and provide personalized recommendations and feedback to help students learn more effectively.

3. Environmental sustainability: AI is being used to monitor and manage environmental sustainability by analyzing large amounts of data from sensors and other sources. For example, AI-powered systems can help detect and prevent environmental disasters, such as oil spills or forest fires.

4. Disaster response: AI is being used to help respond to natural disasters and other emergencies. For example, AI-powered drones can be used to survey disaster areas and assess the damage, while AI-powered chatbots can help provide information and support to people affected by the disaster [12-16][17].

5. Social justice: AI is being used to promote social justice and reduce inequality. For example, AI-powered systems can help detect and prevent discrimination in hiring and other areas, while AI-powered chatbots can provide legal assistance to people who cannot afford a lawyer [18-20].

AI has the potential to make significant positive contributions to society by improving healthcare, education, sustainability, disaster response, and social justice. However, it is important to ensure that AI is developed and deployed in an ethical and responsible manner to maximize its benefits and minimize its risks [21-25].

2.Related Works

The impact of Artificial Intelligence (AI) on the future of humanity has been a topic of significant interest and research in recent years. Many researchers have explored the potential benefits and risks of AI, as well as the ethical and societal implications of its development and deployment.

One related work in this area is the report "Artificial Intelligence and Life in 2030" by the Stanford University One Hundred Year Study on Artificial Intelligence (AI100). This report explores the potential impact of AI on various aspects of life, including healthcare, education, security, and employment. The report also highlights the need for ethical and policy frameworks to guide the development and deployment of AI.

Another related work is the book "Superintelligence: Paths, Dangers, Strategies" by philosopher Nick Bostrom. This book explores the potential risks and challenges posed by the development of superintelligent AI, which could potentially surpass human intelligence and pose existential risks to humanity. Other researchers have explored the potential benefits of AI in various domains. For example, the book "Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again" by cardiologist Eric Topol explores the potential of AI to transform healthcare by improving diagnosis, treatment, and patient outcomes [26-30]. There is a growing body of research exploring the impact of AI on the future of humanity, as well as the opportunities and challenges posed by this technology. This research is critical to ensuring that AI is developed and deployed in a responsible and ethical manner to maximize its benefits and minimize its risks.

3. Proposed Work

The proposed work aims to explore the ethical and social implications of Artificial Intelligence (AI) in shaping the future of humanity. The work will consist of a comprehensive review of the existing literature on the topic, as well as original research to address some of the key gaps and challenges in this area [31-33]. The primary objectives of the proposed work are:

1. To identify the ethical and social implications of AI in various domains, including healthcare, education, sustainability, and social justice.

2. To examine the potential benefits and risks of AI, and to explore how these can be managed and mitigated.

3. To investigate the impact of AI on human values, such as autonomy, privacy, and dignity.

4. To develop guidelines and recommendations for the responsible development and deployment of AI, considering the ethical and social implications of this technology.

The proposed work will use a mixed-methods approach, including literature reviews, case studies, and surveys to collect and analyze data. The work will involve collaboration with experts in various fields, including AI, ethics, and social sciences.

The expected outcomes of the proposed work are:

1. A comprehensive understanding of the ethical and social implications of AI in shaping the future of humanity.

2. Guidelines and recommendations for the responsible development and deployment of AI in various domains.

3. Insights into the impact of AI on human values and the role of AI in promoting or hindering human flourishing.

4. Contributions to the ongoing debate on the role of AI in shaping the future of humanity and the need for ethical and responsible AI development. The proposed work aims to contribute to the emerging field of AI ethics and to provide insights and recommendations for the responsible development and deployment of AI in various domains [34].

Figure 1:AI and the future of Humanity

5. Conclusion

Artificial Intelligence (AI) is transforming the world we live in, and its impact on the future of humanity is a topic of significant interest and concern. AI holds immense potential to help us solve some of the world's most pressing problems, from healthcare and education to sustainability and disaster response. However, there are also valid concerns about the risks and challenges posed by AI, including job displacement, algorithmic bias, and the potential for AI to be misused. As the development and deployment of AI technology continues to accelerate, it is essential that we consider the ethical, societal, and economic implications of this technology. We need to ensure that AI is developed and deployed in an ethical and responsible manner, with a focus on maximizing its benefits and minimizing its risks. This requires collaboration between various stakeholders, including researchers, policymakers, industry leaders, and civil society organizations. The future of humanity will be shaped by the choices we make today about the development and deployment of AI. We can harness the power of AI to create a more just, sustainable, and prosperous world for all. However, this requires a commitment to ethical and responsible AI development, and a recognition of the importance of human values and dignity in the design and deployment of AI. In conclusion, AI has the potential to be a powerful force for good, but we must be vigilant in ensuring that its development and deployment align with our values and aspirations as a society. By working together, we can harness the power of AI to create a better 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.