

The Impact of Current and Future Artificial Intelligence on the Design Profession and Industry

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Abstract:

The idea of researching the current and future impact of artificial intelligence on the design industry and profession was crystallized, with a focus on the implications for the roles and careers of designers now and in the future. Ensuring that designers can be replaced by artificial intelligence technologies, as well as exploring the benefits and limitations that artificial intelligence brings to the field of design and The research sought to address several key research queries, including the overall impact of AI on the digital design sector, the transformative role of AI in reshaping digital design practices, and the future prospects and directions of AI in the design field. To achieve the research objectives, a qualitative research methodology and a descriptive analytical approach were used, which allowed for a comprehensive exploration and analysis of the topic. Thus, the research provided a general overview of artificial intelligence and its applications in the design industry, in addition to discussing future prospects in the experimental section of the exploratory study conducted by the research on four people working in the field (designers) with different and varied jobs, ranging from website and game designer to assistant director in designing characters. And a design teacher at the university, then analyzed the qualitative data, which included their respective visions on the two study questions, then tabulated the answers, compiled the results, discussed them at the end of the research, and presented some recommendations. The most important results of the study were: Artificial intelligence will not completely replace designers, but there is a possibility that it will replace designers in certain aspects of their work due to its superior performance and speed. It can replace emerging designers in the industry while senior designers can use the program as a complementary tool to them and benefit from it without giving way to it replacing them.

Keywords:

Design - Artificial Intelligence - Virtual Reality -Augmented Reality

References:

- 1- Aggarwal, C. 2021. Branding and ai : Leveraging technology to generate brand revenue.
- 2- Business Expert Press. Retrieved on 10 May 2023. Available at <https://ebookcentral.proquest.com/lib/lab-ebooks/reader.action?docID=6658957&ppg=151> -
- 3- Duggle, N. 2023. Advantages and Disadvantages of Artificial Intelligence. Retrieved on 14 May 2023. Available at <https://www.simplilearn.com/advantages-and-disadvantages-ofartificial-intelligence-article>
- 4- Aggarwal, C. 2021. Branding and ai : Leveraging technology to generate brand revenue. Business Expert Press. Retrieved on 10 May 2023. Available at <https://ebookcentral.proquest.com/lib/lab-ebooks/reader.action?docID=6658957&ppg=151>
- 5- Baker, P. 2023. Chatgpt for dummies. John Wiley & Sons, Incorporated. Retrieved on 7 May 2023. Available at https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/b5ag28/alma9920879208062Batat,
- 6- W. 2022. Strategies for the Digital Customer Experience: Connecting Customers with Brands in the Phyigital age. Edward Elgar Publishing Limited. Retrieved on 11 May 2023. Available at https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/b5ag28/alma991380465406
- 7- Marr, B. 2019. Artificial Intelligence in Practice: How 50 Successful Companies Used AI and Machine Learning to Solve Problems, John Wiley & Sons, Incorporated. Retrieved on May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=5751846>
- 8- Lanham, M. 2017. Augmented reality game development: Create your own augmented reality games from scratch with unity 5. Packt Publishing, Limited. Retrieved on 10 May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=4790570&ppg=20>
- 9- Kipper, G., Rampolla, J., Kipper, G., & Rampolla, J. 2012. Augmented reality: An emerging technologies guide to ar. Elsevier Science & Technology Books. Retrieved on 13 May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=1073012&ppg=32>
- 10- Kenyon, T. 2021. How are social media platforms using AI?. Retrieved on 10 May 2023. Available at https://aimagazine.com/ai-strategy/how-are-social-media-platforms-usingai?utm_source=pocket_reader
- 11- Marr, B. 2019. Artificial Intelligence in Practice: How 50 Successful Companies Used AI and Machine Learning to Solve Problems, John Wiley & Sons, Incorporated. Retrieved on 16 May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=5751846>
- 12- Kang, H. & Lou, C. 2022. AI agency vs. human agency: understanding human–AI interactions on TikTok and their implications for user engagement. Journal of ComputerMediated Communication, 27(5). <https://doi.org/10.1093/jcmc/zmac014>

- 13- Duc,D. A.,Dong,T.T.B., Ho,T., & Nguyen, D. T. (Eds.). 2006. Ictacs 2006 – proceedings of the first international conference on theories and applications of computer science 2006:
- 14- The first international conference on theories and applications of computer science 2006. World Scientific Publishing Company. Retrieved on 9 May 2023. Available at https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/1hujjmv/cdi_proquest_ebookcentralchapters_1681080_78_148
- 15- Grimes, B. 2022. What is DALL-E? How it works and how the system generates AI art. Retrieved on 17 May 2023. Available at <https://interestingengineering.com/innovation/whatis-dall-e-how-it-works-and-how-the-system-generates-ai-art>
- 16- Faisal, F. 2022. How design will fare in the age of AI. Retrieved on 21 May 2023. Available at <https://readwrite.com/how-design-will-fare-in-the-age-of-ai/>
- 17- Pradeep, A. K., Appel, A., & Sthanunathan, S. 2018. Ai for marketing and product innovation: Powerful new tools for predicting trends, connecting with customers, and closing sales. John Wiley & Sons, Incorporated. Retrieved on 8 May 2023. Available at: <https://ebookcentral.proquest.com/lib/lab-ebooks/reader.action?docID=5612944&ppg=29>
- 18- Georgescu, Serban. "Application of artificial intelligence technology in product design". Fujitsu scientific & technical journal 53 4 (July 2017): 43-51
- 19- Narayan, R. 2021. Multiply your business value through brand and ai. Business Expert Press. Retrieved on 7 May 2023. Available at: <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=6679897&ppg=49>
- 20- Boden, M. A. 2016. Ai: Its nature and future. Oxford University Press, Incorporated. Retrieved on 6 May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=4545415&ppg>
- 21- Walsh, T. 2018. 2062: The World That AI Made. Black Inc. Retrieved on 5 May 2023. Available https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/1hujjmv/cdi_proquest_ebookcentral_EBC5486298
- 22- Aswal,P.2022.AI Revolution In Design. Retrieved on 14 May 2023. Available at <https://www.iiad.edu.in/the-circle/ai-revolution-in-design/>
- 23- Karaata, E. 2018. Usage of Artificial Intelligence in Today's Graphic Design. Retrieved on 10 May 2023. Available at https://www.researchgate.net/publication/331431169_Usage_of_Artificial_Intelligence_in_Today's_Graphic_Design
- 24- Philips, M. 2018. The present and Future of AI in Design. Retrieved on 10 May 2023. Available at <https://www.toptal.com/designers/product-design/infographic-ai-in-design> Pixel, P. 2023. Impact of AI on Graphic Design: Better Than Human? Retrieved on 16 May 2023. Available at <https://pivotedpixel.com/graphic-design/impact-of-ai-on-graphic-design/>
- 25- Bustamante, D. 2023. Designing with Prompts: AI's Impact on the Creative Process. Retrieved on 15 May 2023. Available at <https://www.reaktor.com/articles/designing-withprompts-ai-s-impact-on-the-creative-process>
- 26- Coveyduc & Anderson, J. L. 2020. Artificial intelligence for business: a roadmap for getting started with AI. Wiley. Retrieved on 10 May 2023. Available at Retrieved on 10 May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=6173699&ppg=47>
- 27- Millington, I. 2021. Ai for games. Taylor & Francis Group. Retrieved on 16 May 2023. Available <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=6716328&ppg=12>
- 28- Patrick D. Smith. 2018. Hands-on artificial intelligence for beginners: an introduction to AI concepts, algorithms, and their implementation (1st edition). Packt. Retrieved on 3 May 2023. available at https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/b5ag28/alma99204009490625
- 29- Rahman, W. 2020. AI and machine learning. SAGE Publications India Pvt, Ltd. Retrieved on 5 May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=6304323&ppg=51>
- 30- Zimmerman, M. 2018. Teaching AI: Exploring new frontiers for learning. International Society for Technology in Education. Retrieved on 1 May 2023. Available at <https://ebookcentral.proquest.com/lib/lab-ebooks/reader.action?docID=5880832&ppg=40>
- 31- Fan, S. 2019. Will AI Replace Us?: A primer for the 21st century. Thames & Hudson, Limited. Retrieved on 10 May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=6676466&ppg=1>
- 32- West, D. M. 2018. The future of work: Robots, AI, and automation. Brookings Institution Press. Retrieved on 2 May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=5180008&ppg=37>
- 33- Margie, M. 2020. AI in Talent Development. Association for Talent Development. Retrieved on 4 May 2023. Available at https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/1hujjmv/cdi_safari_books_v2_9781950496327
- 34- Burnett, S. 2022. The autonomous enterprise: Powered by ai. BCS Learning & Development Limited. Retrieved on 13 May 2023. Available at https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/b5ag28/alma99207959150625
- 35- Aggarwal, C. 2021. Branding and ai : Leveraging technology to generate brand revenue.
- 36- Business Expert Press. Retrieved on 10 May 2023. Available at <https://ebookcentral.proquest.com/lib/lab-ebooks/reader.action?docID=6658957&ppg=151>
- 37- Duggle, N. 2023. Advantages and Disadvantages of Artificial Intelligence. Retrieved on 14 May 2023. Available at <https://www.simplilearn.com/advantages-and-disadvantages-ofartificial-intelligence-article>
- 38- Aggarwal, C. 2021. Branding and ai : Leveraging technology to generate brand revenue. Business Expert Press. Retrieved on 10 May 2023. Available at <https://ebookcentral.proquest.com/lib/lab-ebooks/reader.action?docID=6658957&ppg=151>

- 39- Baker, P. 2023. Chatgpt for dummies. John Wiley & Sons, Incorporated. Retrieved on 7 May 2023. Available at https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/b5ag28/alma9920879208062Batat,
- 40- W. 2022. Strategies for the Digital Customer Experience: Connecting Customers with Brands in the Phygital age. Edward Elgar Publishing Limited. Retrieved on 11 May 2023. Available at https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/b5ag28/alma991380465406
- 41- Marr, B. 2019. Artificial Intelligence in Practice: How 50 Successful Companies Used AI and Machine Learning to Solve Problems, John Wiley & Sons, Incorporated. Retrieved on May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=5751846>
- 42- Lanham, M. 2017. Augmented reality game development: Create your own augmented reality games from scratch with unity 5. Packt Publishing, Limited. Retrieved on 10 May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=4790570&ppg=20>
- 43- Kipper, G., Rampolla, J., Kipper, G., & Rampolla, J. 2012. Augmented reality: An emerging technologies guide to ar. Elsevier Science & Technology Books. Retrieved on 13 May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=1073012&ppg=32>
- 44- Kenyon, T. 2021. How are social media platforms using AI?. Retrieved on 10 May 2023. Available at https://aimagazine.com/ai-strategy/how-are-social-media-platforms-usingai?utm_source=pocket_reader
- 45- - Marr, B. 2019. Artificial Intelligence in Practice: How 50 Successful Companies Used AI and Machine Learning to Solve Problems, John Wiley & Sons, Incorporated. Retrieved on 16 May 2023. Available at <https://ebookcentral.proquest.com/lib/labebooks/reader.action?docID=5751846>
- 46- Kang, H. & Lou, C. 2022. AI agency vs. human agency: understanding human-AI interactions on TikTok and their implications for user engagement. Journal of ComputerMediated Communication, 27(5). <https://doi.org/10.1093/jcmc/zmac014>
- 47- Duc,D. A.,Dong,T.T.B., Ho,T., & Nguyen, D. T. (Eds.). 2006. Ictacs 2006 – proceedings of the first international conference on theories and applications of computer science 2006:
- 48- The first international conference on theories and applications of computer science 2006. World Scientific Publishing Company. Retrieved on 9 May 2023. Available at https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/1hujjmv/cdi_proquest_ebookce
ntralchapters_1681080_78_148
- 49- Grimes, B. 2022. What is DALL-E? How it works and how the system generates AI art. Retrieved on 17 May 2023. Available at <https://interestingengineering.com/innovation/whatis-dall-e-how-it-works-and-how-the-system-generates-ai-art>
- 50- Faisal, F. 2022. How design will fare in the age of AI. Retrieved on 21 May 2023. Available at <https://readwrite.com/how-design-will-fare-in-the-age-of-ai/>
- 51- Mchunu, S. 2023. How to Detect AI Content in 2023. Retrieved on 10 May 2023. Available at <https://www.webfx.com/blog/content-marketing/how-to-detect-ai-content/>
- 52- Ivanovs, A. 2023. 5 Tips for Detecting an Image Generated by AI. Retrieved on 10 May 2023. Available at. <https://stackdiary.com/ai-image-detection/>
- 53- Creswell, J. 2014. Research Design : Qualitative, Quantitative, and Mixed Methods
- 54- Approaches. 4th ed., international student ed. Thousand Oaks: SAGE Publications, 2014.
- 55- Print. Retrieved on 16 May 2023. Available at https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/b5ag28/alma9913804654062
- 56- Sue, V. M., & Ritter, L. A. 2016. Conducting online surveys (Second edition.). SAGE.
- 57- Retrieved on 10 May 2023. Available at
- 58- https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/b5ag28/alma9916553439062
- 59- Dillman, D. A., Smyth, J. D., & Christian, L. M. 2014. Internet, phone, mail, and mixed-mode surveys: The tailored design method. John Wiley & Sons, Incorporated. Retrieved on
- 60- May 2023. Available at https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/b5ag28/alma9919491350062
- 61- Rafay, A. 2021. Understanding the Impact of Artificial Intelligence on the Design Industry. Retrieved on 4 May 2023. Available at <https://readwrite.com/understanding-the-impact-ofartificial-intelligence-on-the-design-industry/>
- 62- Aela, E. 2023. Artificial Intelligence: How AI is Changing Art. Retrieved on 6 May 2023.
- 63- Available at <https://aelaschool.com/en/art/artificial-intelligence-art-changes/>
- 64- Earle, M. and Earle, R. (2000) ‘Adapting the methods of product design to the changes.’
- 65- Building the Future on New Products, Leatherhead, Surrey, LFRA Ltd. pp 79-94
- 66- Earle, R.L. with Earle, M.D. (2008) Unit Operations in Food Processing, Palmerston
- 67- North, New Zealand, NZIFST(Inc) <http://www.nzifst.org.nz/unitoperations/>
- 68- product development’ in MacFie, H. (ed.) Consumer-led Food Product Development,
- 69- Cambridge, Woodhead Publishing Ltd. pp342-82
- 70- Prof. Dr. Elsayed Ibrahim Kandil, Research Paper Called “The Role of Graphic Art in Terrorism” - 2020

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