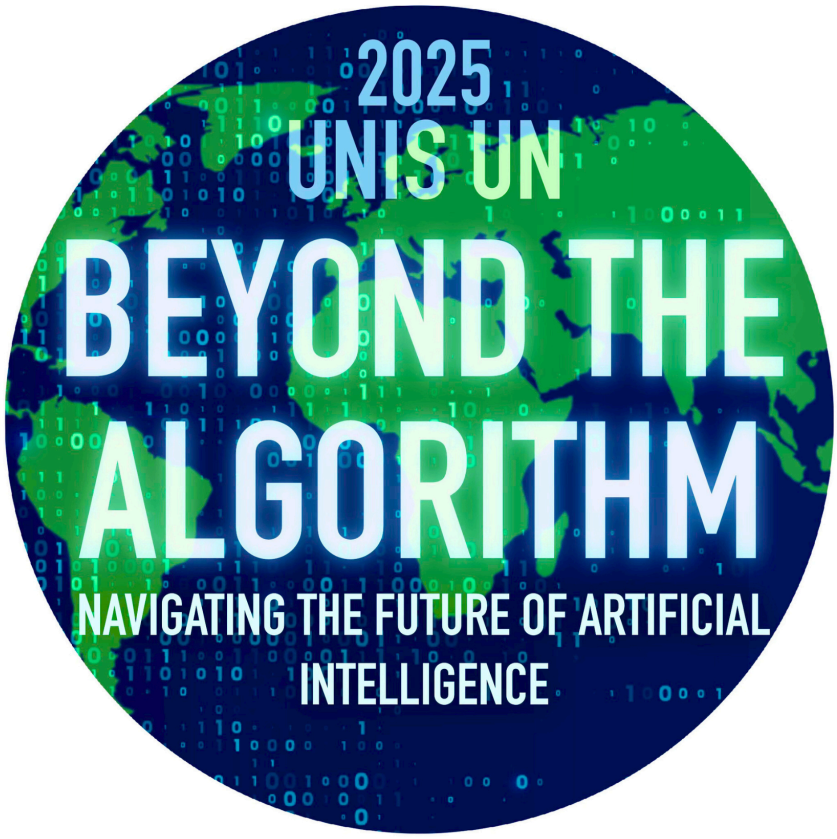
2025
UNIS UN
BEYOND THE
ALGORITHM
NAVIGATING THE FUTURE OF ARTIFICIAL
INTELLIGENCE

UNIS UN 2025

Working Paper

The views expressed in this working paper and at the UNIS-UN conference are not necessarily those of UNIS, The UNITED NATIONS, or their affiliates.

The data used in this paper was assembled as of March 4th, 2025

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A LETTER FROM THE CO-CHAIRS

Dear Participant,

We would like to take this moment to thank you for attending the 49th annual UNIS-UN conference, and to introduce ourselves and the entire UNIS-UN Executive and Organizing committees.

The UNIS-UN Conference was founded in 1976 by Ms. Sylvia Gordon, an inspiring teacher at the United Nations International School. Her dream was to create an event that would draw attention to the world's most pertinent issues while embodying the values of education and cross-cultural understanding shared by UNIS and the UN. Over the years, UNIS-UN has evolved into the largest student-run conference held in the United Nations General Assembly, with over 600 students attending from six continents.

Each year, the responsibility of carrying on UNIS-UN and the legacy of Ms. Gordon is placed on a group of highly dedicated UNIS students who have shown responsibility and passion for continuing her efforts. We are divided into six commissions: Editing, Finance, Logistics, Visiting Schools, Speakers, and Technology. The Executive and Organizing committee members build invaluable leadership and teamwork skills while planning all conference aspects, from speaker and participant invitations to digital outreach and the creation of this impactful working paper. We are honored to say that UNIS-UN is the largest and longest-running student club at UNIS, with upwards of 100 dedicated members.

When determining this year's conference theme, artificial intelligence was an unequivocal choice. AI has the potential to transform all aspects of society in ways previously unimaginable. While it is necessary to explore the potential of AI in developing our communities and reshaping our thinking, it is equally imperative that we understand the ethical and moral shortcomings of this technology. As the future generation of leaders, we must critically analyze how to use AI in an ethical, sustainable, and equitable manner.

Over the coming days, you will have the opportunity to listen to several leading AI innovators and discuss, debate, and exchange a broad spectrum of ideas concerning this timely topic. In a mission to foster youth engagement, in addition to our annual student debate and workshops, this year we launched our *Visiting Student Working Paper Contributions Initiative* along with our *BYTE of Innovation Student Impact Project and Speeches*. The *BYTE of Innovation* initiative is a particularly impactful program that allowed visiting students to develop a project that used AI to affect meaningful change in their home communities. We hope these presentations inspire and empower you to drive positive AI-driven change in your own communities as well.

On that note, we are so excited to welcome you to our 49th annual UNIS-UN Conference!

Here's to a wonderful conference!

Sincerely,
Hahnah Hochman and Celine Teunissen
Co-Chairs of UNIS-UN

FOREWORD

Artificial Intelligence (AI) is reshaping our world, transforming industries, and redefining how we live and work. The innovations that AI is bringing to the global stage hold the potential to inform the development of future generations. Every individual should have equitable access to the benefits and opportunities AI presents. However, challenges such as ethical concerns, and accessibility gaps persist, highlighting the need for responsible AI development.

This working paper addresses the implications of the development of Artificial Intelligence on global issues and examines the challenges that must be addressed and overcome to ensure its responsible growth. Our hope is that its contents will allow you to gain a deeper understanding of the issue as a whole and the challenges the world faces of navigating this powerful tool effectively and responsibly, raising ethical concerns about its potential misuse. How will AI influence fields like education and health? How is AI being used to promote misinformation and hate speech? How are states working together to develop AI? How does the rise of AI impact access to employment across different sectors? What are the implications of AI on the environment? How does the use of AI in creative fields challenge existing copyright laws?

This year marks an exciting milestone in the UNIS UN working paper. We celebrate the contributions of the Visiting Schools to the Working Paper, where students from around the world have shared their research, expanding what has traditionally been a collection of UNIS student contributions. We would like to extend our gratitude to all the visiting students who took part in this initiative and whose contributions have enriched this working paper. While we could not feature every submission in the final selection, we are pleased to share all contributions on our website to recognize your valuable work. We appreciate your time, effort, and dedication in shaping this meaningful discussion regarding AI.

We hope that the following articles assist you in answering these ambitious questions and that they nurture compelling discussions. As you hear from debate panelists and speakers, this information is at your disposal for contribution to the discussion.

DEBATE MOTION

“AI will widen the gap between developed and developing nations.”

In debating this, we are looking forward to students considering the impact of Artificial Intelligence on global development and equality. We encourage the evaluation of both the advantages and disadvantages of AI growth and the ways in which its integration into different economies can either bridge or exacerbate existing divides. Wealthier nations have greater access to AI research, infrastructure, and investment, giving them an advantage in productivity, education, and economic growth. Meanwhile, developing nations may struggle to keep pace due to limited resources, technological infrastructure, and digital literacy.

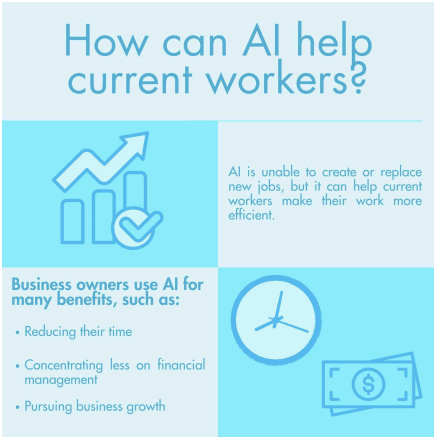
Furthermore, economic disparity is a persistent issue, and the rapid advancement of AI could accelerate global inequalities, leading to monopolization of technology by developed nations. Students should discuss the implications of AI in areas such as job displacement, education, economic dependence, and global competition. Considering all of this, students should attempt to answer many questions: Does AI inherently favor wealthier nations? How can developing countries leverage AI to their advantage? What role should international regulations and policies play in ensuring equitable AI development? Could AI be used to reduce global inequalities instead? If so, what steps must be taken to ensure fair access and distribution?

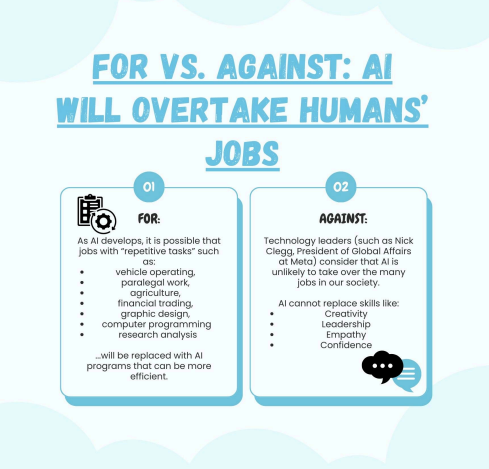
AI IN EMPLOYMENT

Brendan Gieseke - *UNIS*

From the talk of how different industries and workers can benefit from using artificial intelligence (AI) tools to how AI has been changing how employees are selected, there is no doubt that the topic at hand can go without discussion. Over the past two years, AI has sparked a significant rise in interest and has been covered by newspapers and websites around the world, making many citizens of societies across the globe aware of the various perspectives surrounding AI and employment.

One common discussion of AI and employment has long been whether AI can take the jobs of millions, —if not billions—of employees across the world. According to Built In,[1] a tech job recruiting company, as AI develops, it is possible that jobs with "repetitive tasks" such as vehicle operating, paralegal work, agriculture, financial trading, graphic design, computer programming, and research analysis, for example, can be replaced with AI programs that can complete repetitive tasks with more efficiency. However, at the loss of such employment, some believe that AI can create more jobs, such as jobs relating to developing or managing AI technology.





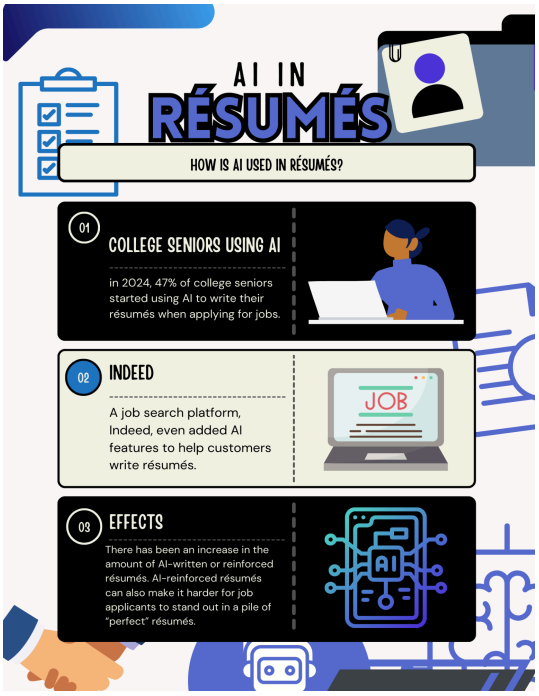
In contrast, despite fear surrounding AI's potential overruling of certain professions, some technology leaders such as Nick Clegg, the President of Global Affairs at Meta, have called artificial intelligence "quite stupid" and consider that it is unlikely AI can take over the many jobs in today's society. (BBC)[2] On WIRED[3] a magazine and YouTube channel centered on technology news, workers of different professions are interviewed to examine the likelihood of AI replacing 20 other occupations. On the channel, the majority of the workers share how AI can be used as a starting block to their respective jobs but not a stand-alone replacement for the level of work humans can produce. Forbes[4] contributor Eli Amdur also voices that AI cannot embrace skills such as creativity, leadership, empathy, and confidence, thus making humans irreplaceable.

Yet, regardless of whether AI is capable of replacing human employment, AI has the potential to neither replace nor create new jobs, but instead aid current workers in increasing work efficiency. In addition to

[1] Urwin, Matthew. "AI Taking Over Jobs: What to Know About the Future of Jobs." Built In, 19th July, 2024, https://builtin.com/artificial-intelligence/ai-replacing-jobs-creating-jobs
[2] Kleinman Zoe, Gerken Tom. "Nick Clegg: AI language systems are 'quite stupid'." BBC, 19th, July, 2023, https://www.bbc.com/news/technology-66238004
[3] Perez-Rey, Lisandro. "A.I. Tries 20 Jobs | WIRED." YouTube, WIRED, 17th, March, 2023. https://www.youtube.com/watch?v=tTagNMmzgQo
[4] Amdur, Eli. "Jobs AI Just Can't Do." Forbes, 5th, November, 2023. https://www.forbes.com/sites/eliamdur/2023/11/25/jobs-ai-just-cant-do/

the 20 employees interviewed on WIRED's interview show, many workers believe that AI can be a guide to developing their success and occupation. According to Forbes,[5] business owners currently work with AI to receive numerous benefits, such as reducing their time, concentrating less on financial management, and pursuing business growth. Investopedia[6] also shares how artificial intelligence can be used to market small businesses and increase social media presence and sales.

However, AI has shifted how professions are conducted and how professionals are hired. According to Forbes[7], in 2024 alone, 47% of college seniors started using AI to write their résumés when applying for jobs. With job search platforms such as Indeed[8] even adding AI features to aid customers in writing résumés, it is safe to say that there has been an increase in the amount of AI-written or reinforced résumés. Though reinforcing résumés with AI is seen to be a great help for many, it can also make it harder for job applicants to stand out in a pile of "perfect" résumés. Job recruiter Maddie Macho tells her TikTok audience, "Normal people who are not using AI are hurting in the job market, and then they have to go start using AI to apply to jobs to be competitive." (NBC)[9]



Finally, AI is being used to help employers determine adequate employees. According to a technology resource company, Korn Ferryv[10], AI allows recruiters to speed up the processes involved in large-pool hiring by, for example, quickly determining which applicants for a job may not match the correct skills or qualifications required for a particular position. Using AI in this process can also reduce the impact of human bias and human error, creating more fairness in the application process. Yet, the process being reinforced with AI can also raise many ethical considerations. There are times when human bias is helpful to both the employer and the applicant. Often, humans can determine if a human is adequate for a job despite missing one or two qualifications. However, with AI, there can not be an assessment that a candidate is worthy of a job if they miss a requirement.[11] In this way, AI can change how employment works internationally. With the potential for AI to benefit jobs, businesses, and workplace talent, it is becoming increasingly complex to imagine a world without artificial intelligence in our societies.

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[5] Hare, Neil. "How Small Businesses Are Using AI—And How Your Business Can Benefit Too." Forbes, 17th, Novemeber, 2023. https://www.forbes.com/sites/allbusiness/2023/11/17/how-small-businesses-are-using-ai-and-how-your-business-can-benefit-too/

[6] Bell, Elysse. "How Small Businesses Can Use AI Tools." Investopedia, 20th, March, 2024. https://www.investopedia.com/how-small-businesses-can-use-ai-tools-8609366

[7] Westfall, Chris. "Top 5 Résumé Trends For 2024, With AI Prompts To Reshape Your CV." Forbes, 23rd, January, 2024. https://www.forbes.com/sites/chriswestfall/2024/01/23/top-5-resume-trends-for-2024-with-ai-prompts-to-reshape-your-cv/

[8] Indeed Editorial Team. "How Indeed Uses AI to Provide Better Matching Context for Job Seekers." Indeed, 15th, August, 2024. https://www.indeed.com/lead/how-indeed-uses-ai-to-provide-better-matching-context-for-job-seekers

[9] Pargas, Sophia. "AI is supposed to make applying to jobs easier — but it might be creating another problem." NBC News, NBC, 17th, November, 2024. https://www.nbcnews.com/tech/innovation/ai-making-job-applications-easier-creating-another-problem-rcna179683

[10] "AI In The Workplace." Korn Ferry. https://www.kornferry.com/insights/featured-topics/gen-ai-in-the-workplace

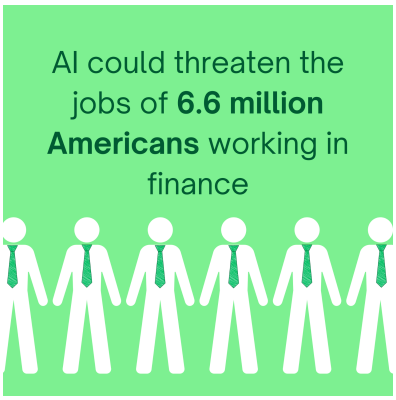
[11] "Artificial Intelligence's Role in Recruitment." Focus People, 22nd, May, 2024. https://www.focuspeople.com/2024/05/22/ethical-considerations-for-ai-use-in-recruitment/

AI IN FINANCE - VISITING SCHOOL CONTRIBUTION

Quincy Levine - *Crossroads School for Arts and Sciences*

Artificial intelligence's use in finance presents many opportunities for economic growth, stability, and efficiency. AI can be a more convenient way for individuals and financial firms to manage and access money safely. Advancements in market-predicting algorithms will make it easier for both the public and private sectors to manage their money. AI can heavily improve cost savings, advanced safety networks, and highly personalized investment portfolios.[12] AI's evolution can introduce a secure and efficient investment system that can be maximized by all.

Advancement of market predicting algorithms enables quick and analytical-based decision-making. AI relying on data-driven insights, free of human emotion makes for comprehensive low-risk high-return scenarios. Similarly, algorithms can operate synonymously, allowing capitalization on trading opportunities across changing financial landscapes. Although there are numerous upsides to AI usage in the financial field, there are some unwanted risks that come with technology usage.[13] An algorithm's performance heavily relies on the type of data they are trained on, so biases present in training data can lead to poor and ill-informed decision-making. Another issue that can occur via AI-based training is the exacerbation of market volatility. If multiple AI algorithms react similarly to a market event, rapid price changes and market swings may occur.[14] Although AI algorithms offer amazing opportunities in the financial world, it is important to recognize the unpredictability of this new but important technology.



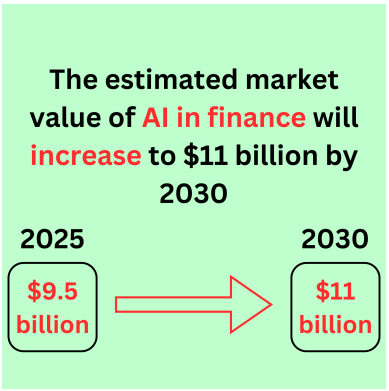
AI can develop advanced algorithms for market prediction, serving as an advisor for personal trading. AI models can personally customize financial portfolios, catering to an individual's trading beliefs and goals.[15] Similarly, AI can mitigate the emotional aspect that comes with trading. Many traders can often succumb to impulsive actions driven by short-term decision-making. Well-programmed AI models can keep a trader disciplined and avoid mistakes caused by emotional mishaps.[16] Some factors come with personalized AI algorithms which could have long-term consequences on some job markets. Highly efficient and popular algorithms could render financial advisors obsolete, threatening over 15,000 SEC-registered advisees in the

[12] Finio, Mathew. "What Is Artificial Intelligence in Finance?" Edited by Amanda Downie. IBM, December 23, 2024. https://www.ibm.com/think/topics/artificial-intelligence-finance.
[13] Turton, Adrian. "Ai Is Revolutionizing Algo Trading but Markets Must Remain Vigilant." *ION*, 6 Sept. 2024, iongroup.com/blog/markets/ai-is-revolutionizing-algo-trading-but-markets-must-remain-vigilant/.
[14] Turton, Adrian. "Ai Is Revolutionizing Algo Trading but Markets Must Remain Vigilant." *ION*, 6 Sept. 2024, iongroup.com/blog/markets/ai-is-revolutionizing-algo-trading-but-markets-must-remain-vigilant/.
[15] Limited, Infosys. "Artificial Intelligence in Finance: Infosys BPM." Infosys. Accessed January 22, 2025. https://www.infosysbpm.com/blogs/finance-accounting/artificial-intelligence-in-finance.html#:~:text=AI%20provides%20personalised%20recommendations%20to,and%20save%20on%20the%20interest.
[16] Turton, Adrian. "Ai Is Revolutionizing Algo Trading but Markets Must Remain Vigilant." *ION*, 6 Sept. 2024, iongroup.com/blog/markets/ai-is-revolutionizing-algo-trading-but-markets-must-remain-vigilant/.

United States alone.[17] This technology could also pose a danger to the financial sector in general, threatening over 6.6 million Americans working in the finance industry.[18]

AI algorithms also provide a safer database for transactions and fraud prevention. As e-commerce and digital banking have surged, the market for scams and digital theft has also increased. Without highly advanced tools, such as specialized security algorithms, the advancement of computerized fraud will continue to take place.[19] Similarly, AI can also predict potential fraud based on past incidents, using key data to detect when or where fraud might take place. Using AI as a complementary piece of digital fraud detection is key in overall safety for online trading and financial services. Advanced systems can flag potential fraud in real-time, alerting traders while ensuring losses are kept to a minimum.[20]

A 2021 Grand View Research article estimated the market value of AI in finance to be just shy of $9.5 billion. This value is expected to grow to just north of $11 billion by 2030.[21] In December 2023, an Institution of International Finance (IFF) article reported that around 15% of financial institutions have over 350 AI models in their inventories.[22] Basic models usually start at $5,000, but costs vary due to algorithm complexity. Some highly advanced models used by elite corporations can cost up to $500,000.[23] Two common branches of AI that are currently employed by major financial institutions are deep learning and national language processing (NLP) technology. Deep learning technology specializes in mirroring the human brain's intake of knowledge and information. This specific type of AI can help institutions predict stock market performance and currency exchange rates. National language processing specializes in the analysis of financial news and research reports, which can enable quick, informed decision-making. This technology can serve as a personal financial advisor, giving a trader the most valuable information possible when considering buying or selling a stock.[24]

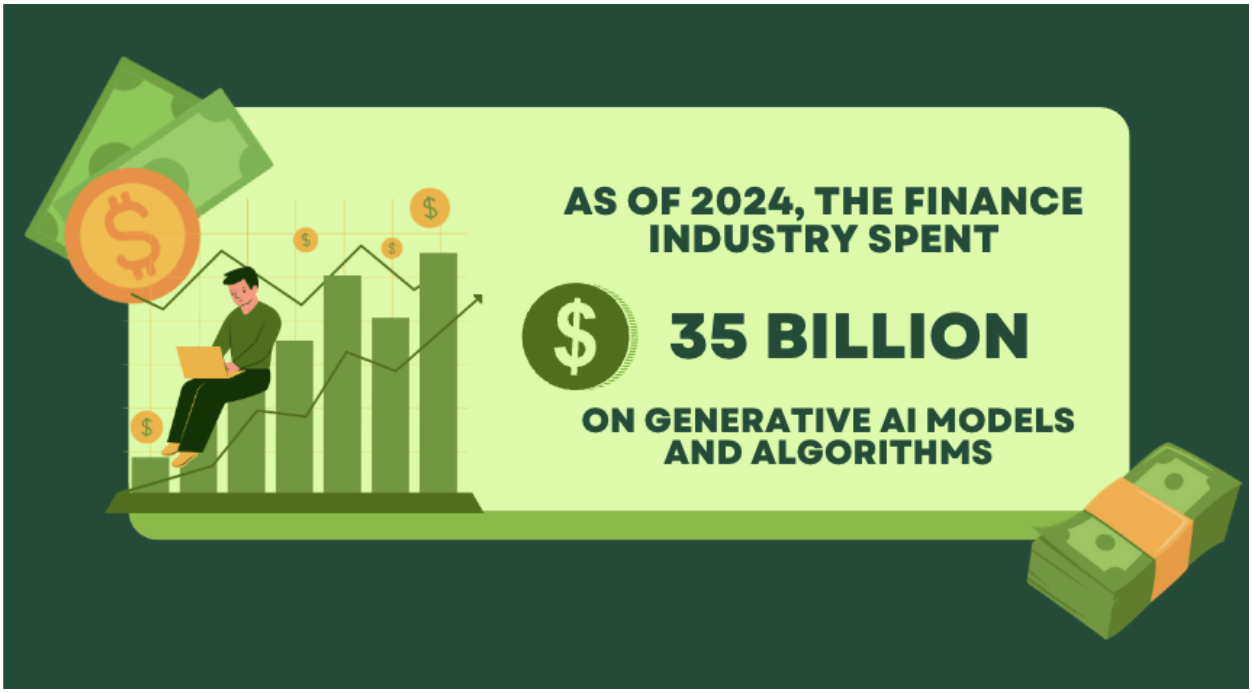


Recently, many corporations around the world have developed advanced software specifically tailored to the financial industry. ZestFinance, a privately held company that was rebranded as Zest AI, uses AI to work with banks and auto lenders to increase loan approvals while reducing credit risk. As of its last

[17]Snapshot 2024. Accessed January 23, 2025. https://www.investmentadviser.org/wp-content/uploads/2024/06/Snapshot2024_FINAL.pdf.
[18] Garcia, Maria. "Financial Services Industry Statistics." *10xhire*, 24 May 2024, 10xhire.io/financial-services-industry-statistics/#:~:text=The%20financial%20services%20sector%20employs,industry%20as%20of%20February%202023.
[19] Turton, Adrian. "Ai Is Revolutionizing Algo Trading but Markets Must Remain Vigilant." *ION*, 6 Sept. 2024, iongroup.com/blog/markets/ai-is-revolutionizing-algo-trading-but-markets-must-remain-vigilant/.
[20] Turton, Adrian. "Ai Is Revolutionizing Algo Trading but Markets Must Remain Vigilant." *ION*, 6 Sept. 2024, iongroup.com/blog/markets/ai-is-revolutionizing-algo-trading-but-markets-must-remain-vigilant/.
[21] "Artificial Intelligence in Fintech Market Size Report, 2030." Artificial Intelligence In Fintech Market Size Report, 2030. Accessed January 22, 2025. https://www.grandviewresearch.com/industry-analysis/artificial-intelligence-in-fintech-market-report.
[22] Report on AI/ML use in financial services. Accessed January 23, 2025. https://www.iif.com/portals/0/Files/content/2023 IIF-EY Survey Report on AI_ML Use in Financial Services - Public Report - Final.pdf.
[23] "AI Pricing: How Much Does Ai Cost in 2025?: Future Processing." Technology & Software Development Blog | Future Processing, January 16, 2025. https://www.future-processing.com/blog/ai-pricing-is-ai-expensive/#:~:text=Simple%20AI%20models%20can%20start,size%2C%20expertise%2C%20and%20location.
[24] "AI in Finance: How Generative AI and Large Language Models Can Be Applied to Financial Services Workflows." Snowflake. Accessed January 22, 2025. https://www.snowflake.com/trending/ai-finance/.

evaluation in November of 2022, the company is currently worth $250 million.[25] Similarly, the bank Morgan Stanley is currently using an AI model that summarizes video meetings and generates follow-up emails. Recently, BNP Paribas and TD Bank have announced partnerships to develop top-notch AI models, which could help in bank security and analysis.[26] Similarly, JPMorgan has employed LLM Suite, an AI model used to help its over 50,000 employees in research analysis. Technology like this can be highly beneficial in helping brokers develop creative solutions to common problems and summarizing extensive documents.[27]

As of 2024, Forbes reports that the finance industry spent about $35 billion on generative AI models and algorithms. This number is only expected to rise, with the expected industry spending to be $97 billion in 2027.[28] These increased spendings forecast an annual growth rate of 29%.[29] The use of AI algorithms in the financial sector is increasingly common, offering a well-informed and secure financial future for the private and public sectors alike.



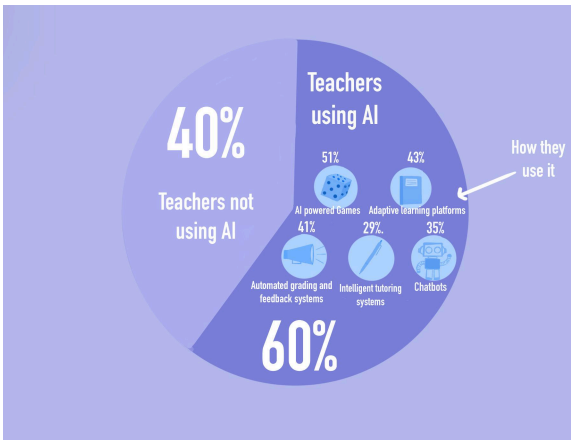
[25] "Zest Ai | Company Overview & News." Forbes. Accessed January 22, 2025. https://www.forbes.com/companies/zest-ai/#:~:text=Latest%20valuation%3A%20%24250%20million.,of%20last%20valuation%3A%20November%202022.
[26] Parker, David. "The Future of AI in Financial Services." Forbes, October 4, 2024. https://www.forbes.com/sites/davidparker/2024/10/03/the-future-of-ai-in-financial-services/.
[27] MSV, Janakiram. "JPMorgan Chase Leads Ai Revolution in Finance with Launch of LLM Suite." Forbes, August 27, 2024. https://www.forbes.com/sites/janakirammsv/2024/07/30/jpmorgan-chase-leads-ai-revolution-in-finance-with-launch-of-llm-suite/.
[28] Parker, David. "The Future of AI in Financial Services." Forbes, October 4, 2024. https://www.forbes.com/sites/davidparker/2024/10/03/the-future-of-ai-in-financial-services/.
[29] Parker, David. "The Future of AI in Financial Services." Forbes, October 4, 2024. https://www.forbes.com/sites/davidparker/2024/10/03/the-future-of-ai-in-financial-services/.

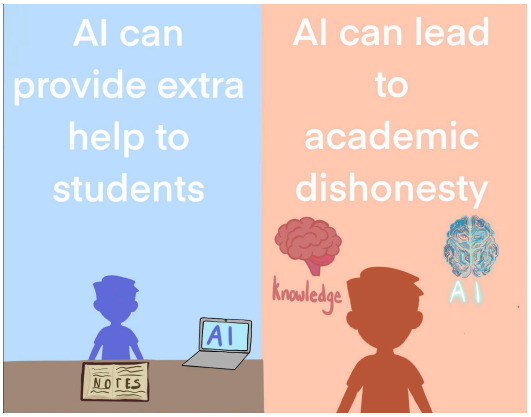
AI IN EDUCATION

Layla Bouillon - *UNIS*

Artificial intelligence, or AI, has become a widely adopted tool used in education. There are many benefits to using AI in education: individualized learning, tutoring services, study techniques, etc. However, the increased use of AI in education comes at a cost: the individual's ability to think and act for themselves.

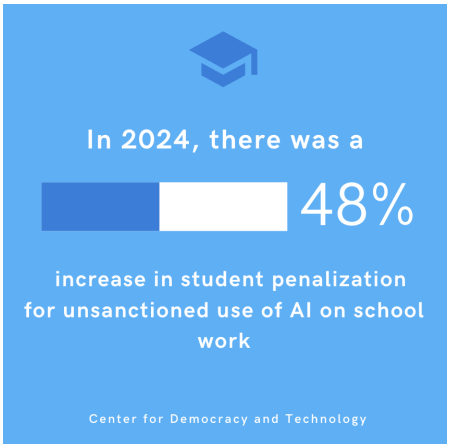
A study by Forbes found that 60% of teachers have integrated some form of AI into their teaching, the most common use of AI in education being AI-powered educational games, with 51% admitting this as the reason for using AI. Other common uses of AI tools include adaptive learning platforms (43%), automated grading and feedback systems (41%), intelligent tutoring systems (29%), and chatbots to support student understanding (35%). Additionally, AI is commonly used by both teachers and students for research purposes, both to complete and create assignments and tasks.[30]





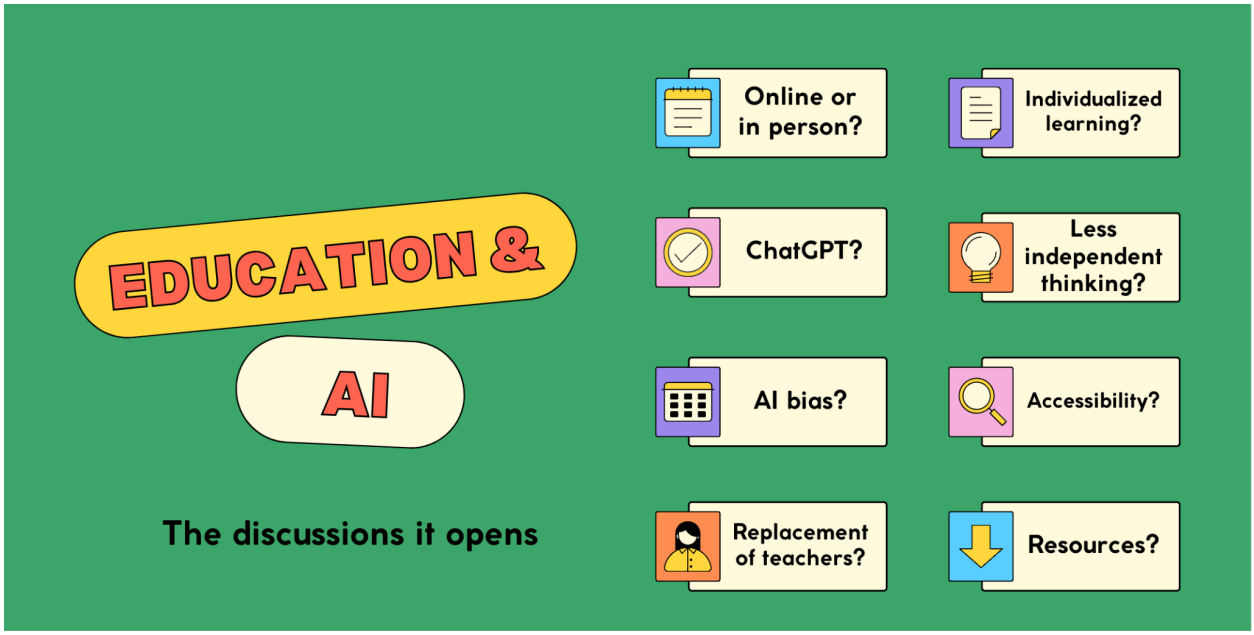
The benefits of AI are numerous and extremely useful when it comes to individualizing learning and supporting students academically. It's also useful for educators who can spend less time grading assignments or creating practice exam questions and can instead focus their attention on students who need more support in their learning. Every student is different and has their own learning needs. Unfortunately, in a class of 20 or more kids, teachers are often spread thin, unable to give each student the attention they need to succeed academically. Here is one area where AI could be highly beneficial for everyone. Students can use an AI platform to learn at their own pace in a way that they can understand: visual learners can learn through videos and images, textual learners can read, etc. AI would also allow teachers to offer more support to students who struggle more academically by giving them their full attention rather than having to dart back and forth between each student.[31]

[30]Aiprm. "Ai in Education Statistics · AIPRM." *AIPRM Trademarked Icon Black*, 11 July 2024, www.aiprm.com/ai-in-education-statistics/#ai-and-cheating-statistics-in-education.
[31]"The Role of AI in Modern Education." *University of Iowa*, The University of Iowa, 27 Aug. 2024, onlineprograms.education.uiowa.edu/blog/role-of-ai-in-modern-education.



Something that poses a huge concern when it comes to the use of AI in education is cheating. Whether students generate written responses for essay assignments or use AI to look up answers for an online exam, access to AI makes academic dishonesty easier than ever. According to a survey conducted by the Center for Democracy and Technology, the number of students reprimanded for unsanctioned use of AI in school assignments increased by 48% in just the last year.[32] However, AI detection tools can be highly unreliable, making it difficult to determine the authenticity of a student's work. Because of this, experts are warning schools to limit the usage of these tools and instead focus on educating students about utilizing AI with integrity.

The future of AI holds immense potential but also raises major concerns. As AI becomes more integrated into the education system, will there come a day when children will learn solely from AI with no need for professional educators? Will education transition from in-person to fully online? Will AI tools like ChatGPT lead to students no longer needing to retain information or knowledge, making school irrelevant? It is impossible to tell what role AI will play in education in the future, whether 5 years from now or 50, but for now, schools can implement policies to regulate and monitor the usage of AI. [33]



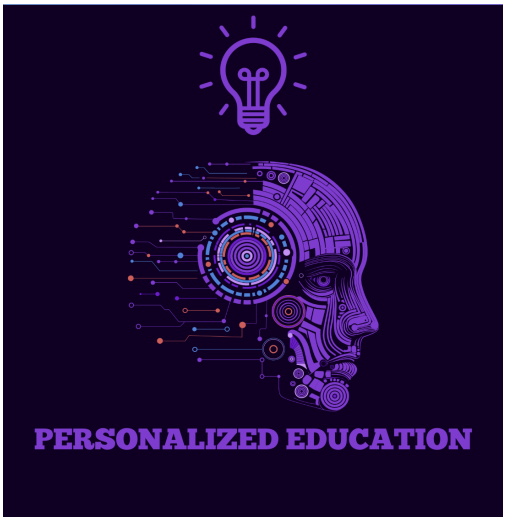
[32]Prothero, Arianna. "New Data Reveal How Many Students Are Using AI to Cheat." *Education Week*, Education Week, 24 Oct. 2024, www.edweek.org/technology/new-data-reveal-how-many-students-are-using-ai-to-cheat/2024/04.

[33] "The Future of Learning: AI Is Revolutionizing Education 4.0." *World Economic Forum*, www.weforum.org/stories/2024/04/future-learning-ai-revolutionizing-education-4-0/. Accessed 4 Jan. 2025.

AI IN EDUCATION - VISITING SCHOOL CONTRIBUTION

Amayel Camara - *Institut Florimont*

In 2015, the United Nations adopted 17 Sustainable Development Goals (SDG),[34] the fourth of which was to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. While EdTech, education technology, continues to grow as an industry, thanks to Artificial Intelligence and other new technologies,[35] questions remain on the capacity to solve the most important educational challenges.[36] There are multiple definitions of AI, and the concept has evolved significantly. One of the latest refers to developing and using computer systems capable of performing tasks that typically require human intelligence. In the education sector, this technology seeks to enhance instructional practices, personalize learning experiences, support, and streamline and automate administrative processes. However, the rapid adoption of the tools raises concerns about data privacy, ethics, and academic integrity.



The first advantage is the capacity to provide personalized learning experiences by analyzing individual student profiles to tailor educational content meeting their specific needs and learning pace. The student is then provided with customized resources matching their need and learning styles. In their more basic form, adaptive learning platforms, for instance, adjust the difficulty of tasks based on student performance to ensure optimal learning progression. Parallel to the student-oriented pace is the intelligent tutoring system (ITS), which provides real-time feedback and support to students, just like a one-on-one tutor would. Automated assessments represent another component of AI-based tools that can rapidly grade assignments and exams and provide quick and unbiased feedback, thus allowing students to understand their mistakes and improve their performance.

AI-based tools further include possibilities to improve administrative efficiency. Indeed, for educators and students, organizing tasks such as scheduling, enrollment, and resource allocation, may help reduce the workload while doing them better, with fewer mistakes. This allows for improved efficiency and time management, leaving educators to carve time for tasks that require a deeper understanding or application of emotional intelligence. The optimisation of schedules and calendars can support the efficient use of time.

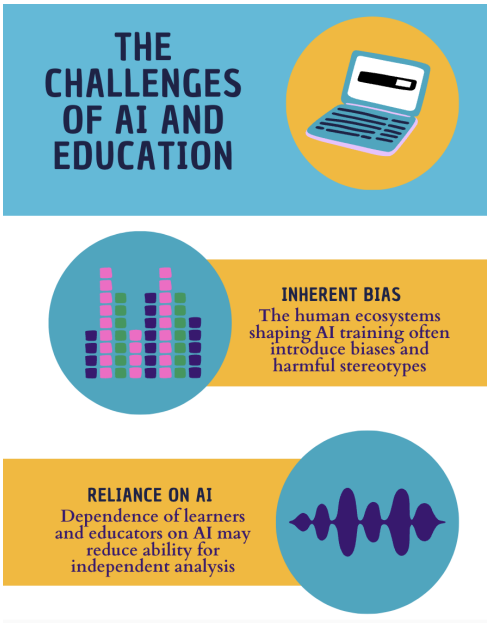
However, there are many AI scandals in which tools are used to plagiarize and cheat, sometimes even unknowingly. The incidents have naturally sparked debates about academic integrity and the need for

[34] "The SDGS in Action." *United Nations Development Programme*, www.undp.org/sustainable-development-goals.

[35] The World Economic Forum anticipates that Edtech industry will continue to grow strongly in the next decade. https://www.weforum.org/stories/2024/02/these-are-the-4-key-trends-that-will-shape-the-edtech-market-into -2030/

[36] United Nations Educational, Scientific and Cultural Organization, editor. "Technology in Education." *UNESCO*, edited by United Nations Educational, Scientific and Cultural Organization, www.unesco.org/gem-report/en/ technology. Accessed 26 Feb. 2025.

updated policies to address the misuse of AI and institutions' expectations on AI in educational settings.[37] While there are tools to detect students' use of generative AI, their performance remains limited[38] and in many cases, they have done more harm than good, flagging the authentic work of students, especially for those for whom English is not a native language,[39] as AI-written. Furthermore, if the same AI used to generate content can also be used to detect the use of AI, despite the plurality of platforms, nothing prevents a student from asking an AI to produce non-detectable content by AI detector tools.



Other limitations and potential threats to using AI in education are linked to the intrinsic biases included in the algorithm, with many breaches of data privacy from profit-based organizations. This is even more important, as the learners and educators often do not lead the development process and the industry of AI. This was one of the main findings of the UNESCO 2023 Global Monitoring Report that aligns with the #TechOnOurTerms campaign, which decries the fact that the learner's needs are often not prioritized and notes that no assessment is done on whether the use of AI would be appropriate, equitable, evidence-based and sustainable. Furthermore, the human ecosystems used in the training of AI have many times presented biases or stereotypes harmful to users and yet that closely reflect society's inequalities.[40] The ability to do research and practice critical thinking may also be undermined if students, or even educators, continue to rely on AI to generate academic pieces, with AI usually recording very low levels of citational justice yet great ethnocentric epistemology.

AI is revolutionising many sectors, including education. Among other benefits, the technology enables personalised learning experiences, automates education-related administrative tasks, and generates interactive and engaging learning materials by enhancing accessibility for students, including those with disabilities. With AI tools, SDG 4 can be attained more easily everywhere if accessible, but this does not mean it will do so equitably and sustainably. Moreover, the recent AI cheating scandals highlight the dangers of easily accessible and powerful AI tools, which can be used without academic integrity or respect for privacy and ethics in educational settings. At the same time, the ever-increasing student-machine interaction may reduce the teacher-student and student-to-student(s) interaction and contribute to limiting the socialisation that education partly aims to achieve. But AI remains a means to an end. Attaining SDG 4 for those living in low- and middle-income countries and contexts with little to no connectivity and access to AI will need to be through no-tech or low-tech means, prioritizing the socio-political aspects of development.

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[37] Ihekweazu, C., Zhou, B., & Adelowo, E. A. (2023). *The Use of Artificial Intelligence in Academic Dishonesty: Ethical Considerations*.

[38] Belleni, Valentina, et al. "Between Human and AI: Assessing the Reliability of AI Text Detection Tools." *Taylor and Francis Online*, 2 Feb. 2024, www.tandfonline.com/doi/full/10.1080/03007995.2024.2310086.

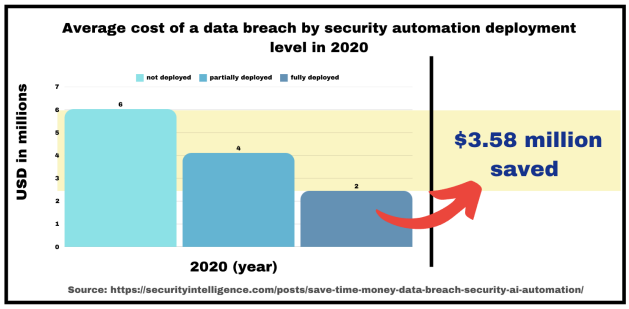
[39] Meyers, Andrew. "AI-Detectors Biased against Non-Native English Writers." *Stanford University Human-Centered Artificial Intelligence*, Stanford University, 15 May 2023, hai.stanford.edu/news/ai-detectors-biased-against-non-native-english-writers.

[40] Manyika, J., Silberg, J. and Presten, B. (2019). *What Do We Do About the Biases in AI?* [online] Harvard Business Review. Available at: https://hbr.org/2019/10/what-do-we-do-about-the-biases-in-ai.

AI IN CYBERSECURITY

Kai Fleming - *UNIS*

In recent years, Artificial Intelligence has become increasingly important in many different fields of application from transportation to entertainment, and cyber security is no exception.[41] Cybersecurity is defined as the art of protecting networks, devices and data from unauthorized access. It is important for the protection of sensitive information and intellectual property of the individual from fraud and theft.[42] Currently, malicious actors have begun to utilize AI-powered technologies to compromise accounts and companies at an unprecedented speed, compelling agencies to find new cybersecurity solutions in the form of AI. Through AI, organizations can reap many benefits, such as improved threat detection and response time, but AI is not without its challenges.

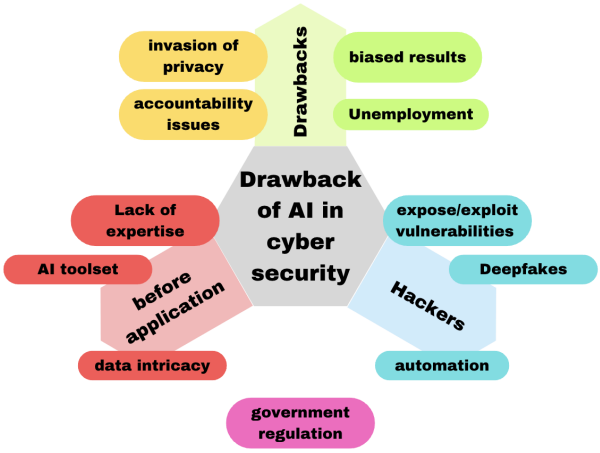


To begin, AI has several benefits for securing networks and devices as opposed to Traditional Cybersecurity. Older methods of network protection primarily use signature-based approaches to detect threats, where known threat signatures are compared to incoming network data. This manual data-matching process is vulnerable to new, unknown signatures, delaying response time as it requires human intervention. Furthermore, false positives are far more frequent in traditional cybersecurity, as old solutions do not reflect current threats. By automating these processes through AI, organizations can more effectively isolate and contain attacks.[43] According to Cisco, a multinational cybersecurity company, 7 trillion threats were blocked for customers in 2018. In 2020, companies employing security automation saved $3.58 million globally, compared to companies who had no AI automation.[44] Additionally, the global market for AI in cybersecurity is valued at roughly 25 billion USD in 2024 and is expected to rise to approximately 147 billion USD by 2034.[45]

The benefits of AI are mainly seen through its detection, prediction and responsive capabilities. AI is most extensively used for detecting anomalies and malicious code in incoming data. It can also conduct behavioral analysis, where user behaviors can be examined and compared to usual behaviors to detect internal threats and account takeovers. The capacity for AI to examine enormous datasets at once also allows companies to actively search for malicious actors instead of passively defending information.

[41] University of Illinois Chicago. "What Is (AI) Artificial Intelligence?" *University of Illinois Chicago*, Board of Trustees of the U of Illinois, 7 May 2024, meng.uic.edu/news-stories/ai-artificial-intelligence-what-is-the-definition-of-ai-and-how-does-ai-work/. Accessed 19 Dec. 2024.
[42] ---. "What Is Cybersecurity?" *Cybersecurity and Infrastructure Security Agency*, 1 Feb. 2021, www.cisa.gov/news-events/news/what-cybersecurity. Accessed 19 Dec. 2024.
[43] Ticong, Liz. "AI in Cybersecurity: The Comprehensive Guide to Modern Security." *Datamation*, TechnologyAdvice, 29 Apr. 2024, www.datamation.com/security/ai-in-cybersecurity/. Accessed 19 Dec. 2024.
[44] Costa, Estevao. "Artificial Intelligence in Cybersecurity: The Benefits and Challenges." *CENGN*, 18 Aug. 2021, www.cengn.ca/information-centre/innovation/artificial-intelligence-in-cybersecurity-the-benefits-and-challenges/. Accessed 19 Dec. 2024.
[45] Precedence Research. "Artificial Intelligence (AI) in Cybersecurity Market Size, Share, and Trends 2024 to 2034." *Precedence Research*, 13 Nov. 2024, www.precedenceresearch.com/artificial-intelligence-in-cybersecurity-market. Accessed 19 Dec. 2024.

Furthermore, AI's predictive capabilities can be used to simulate cyberattacks, exposing vulnerabilities to be strengthened before cybercriminals can exploit them. AI can also identify common traffic patterns in networks to optimize workloads and manage all devices in the network.[46]



Lastly, the responsive capabilities of AI are exercised the least but are still imperative to effective network protection. AI can be used to autonomously deliver alerts, block the influx of malicious data, and isolate security breaches. Moreover, AI can adapt to cyberattacks in real time, elevating response times as well as creating a stronger defense based on data from past incidents. For example, AI can alert users of weak, guessable passwords from collected data.[47] AI's detection, prediction and responsive ability, as well as the automation of routine tasks, results in numerous positive impacts. For instance, IT professionals can devote more time to more complex tasks, and considerable amounts of time and resources can be saved from investigating false positives. Despite these numerous advantages, companies experience several drawbacks through the application of AI.

Next, AI contains various disadvantages when used in cybersecurity. One example is the possibility of bias. If an AI security software receives prejudiced training data, it can lead to discriminatory outcomes or false positives that weaken the security of an organization. Furthermore, incomplete or false training data may cause misinterpretation by the AI, blocking legitimate activities and authorized users. Another example are the ethical implications of using AI in cybersecurity. Algorithms conducting behavioral analyses may invade the privacy of individuals when expanding its data. Furthermore, the lack of human involvement reduces transparency, as well as creating issues for the accountability of possible damages. Unemployment is another factor of consideration. Automated processes may replace IT workers, such as in customer service,[48] discouraging AI use.

Additionally, AI can present challenges even before implementation, primarily in the form of a lack of expertise on AI, data intricacy, and software tools to support an organization. An absence of knowledge to code and manage AI in cybersecurity is seen as a critical issue by companies planning to adopt AI, and high data loads and creating a proper AI toolset is seen as larger issues by agencies already implementing AI. Moreover, data intricacy indicates the difficulty with managing enormous amounts of incoming data

[46] Costa, Estevao. "Artificial Intelligence in Cybersecurity: The Benefits and Challenges." *CENGN*, 18 Aug. 2021, www.cengn.ca/information-centre/innovation/artificial-intelligence-in-cybersecurity-the-benefits-and-challenges/. Accessed 19 Dec. 2024.

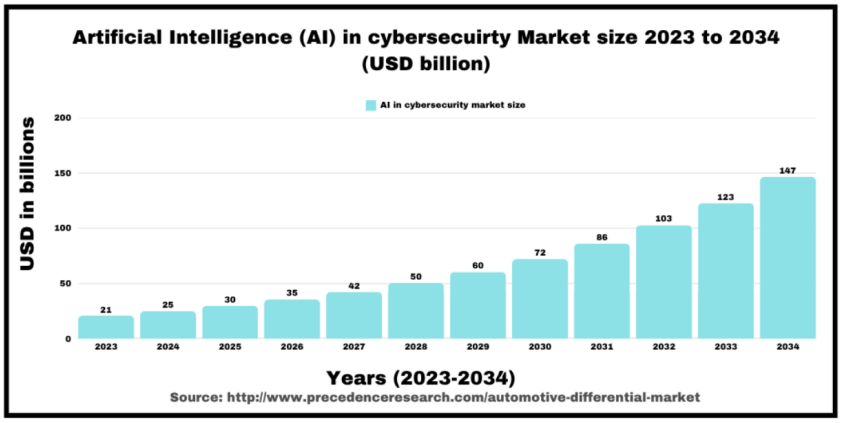
[47] Kerwin, Jenna. "What Is the Role of AI in Cybersecurity?" *Excelsior University*, 1 Aug. 2024, www.excelsior.edu/article/ai-in-cybersecurity/. Accessed 19 Dec. 2024.

[48] Ticong, Liz. "AI in Cybersecurity: The Comprehensive Guide to Modern Security." *Datamation*, TechnologyAdvice, 29 Apr. 2024, www.datamation.com/security/ai-in-cybersecurity/. Accessed 19 Dec. 2024.

and procuring code to train AIs.[49] Combined with the time and resources required to utilize AI, as well as copious governmental regulations[50] such as The Framework Convention on Artificial Intelligence,[51] regarding safe AI use, Artificial Intelligence as a cybersecurity solution can be difficult for most companies to implement.

The use of AI in cybersecurity is not limited to organizations that protect their data, as hackers and cybercriminals employ AI to increase the efficiency and effectiveness of their operations. Malicious actors can use AI to automate and personalize scams and phishing attacks in social engineering schemes. Hackers can intentionally manipulate AI input data of organizations in a process known as "fuzzing" to expose vulnerabilities.[52] Lastly, cybercriminals can use deepfakes to create audio or visuals for identity theft, and advanced algorithms can decipher passwords quickly.[53]AI has provided hackers with many avenues to evade and attack companies, posing many dangers to the protection of networks and sensitive information.

Ultimately, AI in cybersecurity is a multifaceted dilemma with many benefits and drawbacks when implementing and adopting it. Advanced cybersecurity methods that employ AI can also be used by cybercriminals to attack more frequently and destructively. In 2025, 93% of security leaders expect AI attacks every day, and a larger 95% of security professionals believe that AI softwares will enhance network security.[54] As leading tech companies such as Cisco,[55] Palo Alto Networks and Crowdstrike[56] make great strides in AI softwares, Artificial Intelligence will continue to become more prevalent as an effective cybersecurity solution in society today.



[49] Costa, Estevao. "Artificial Intelligence in Cybersecurity: The Benefits and Challenges." *CENGN*, 18 Aug. 2021, www.cengn.ca/information-centre/innovation/artificial-intelligence-in-cybersecurity-the-benefits-and-challenges/. Accessed 19 Dec. 2024.

[50] Ticong, Liz. "AI in Cybersecurity: The Comprehensive Guide to Modern Security." *Datamation*, TechnologyAdvice, 29 Apr. 2024, www.datamation.com/security/ai-in-cybersecurity/. Accessed 19 Dec. 2024.

[51] Council of Europe. "The Framework Convention on Artificial Intelligence." *Council of Europe*, 2024, www.coe.int/en/web/artificial-intelligence/the-framework-convention-on-artificial-intelligence. Accessed 4 Jan. 2025.

[52] Costa, Estevao. "Artificial Intelligence in Cybersecurity: The Benefits and Challenges." *CENGN*, 18 Aug. 2021, www.cengn.ca/information-centre/innovation/artificial-intelligence-in-cybersecurity-the-benefits-and-challenges/. Accessed 19 Dec. 2024.

[53] Morgan Stanley. "AI and Cybersecurity: A New Era." *Morgan Stanley*, 11 Sept. 2024, www.morganstanley.com/articles/ai-cybersecurity-new-era. Accessed 19 Dec. 2024.

[54] Fox, Jacob. "Top 40 AI Cybersecurity Statistics." *Cobalt*, 10 Oct. 2024, www.cobalt.io/blog/top-40-ai-cybersecurity-statistics. Accessed 4 Jan. 2025.

[55] Wheeler, Kitty. "Top 10: Cybersecurity Companies." *Technology Magazine*, 16 Oct. 2024, technologymagazine.com/articles/top-10-cybersecurity-companies. Accessed 19 Dec. 2024.

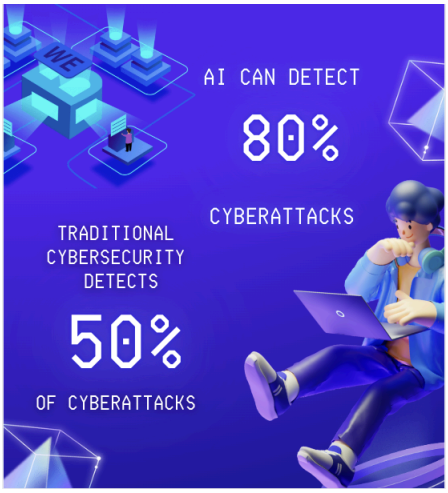
[56] Grace, Meeba. "Top 8 AI Cybersecurity Companies – Tips to Choose the Best Company." *Sprinto*, 10 Oct. 2024, sprinto.com/blog/ai-cybersecurity-companies/. Accessed 19 Dec. 2024.

AI IN CYBERSECURITY

Siana Black - *UNIS*

Artificial Intelligence (AI) has revolutionized industries worldwide, offering remarkable advancements in efficiency, accuracy, and innovation. In the realm of cybersecurity, AI stands out as both a game changer and a double-edged sword. Research reveals that nearly 69% of organizations globally are using or planning to use AI to bolster their cybersecurity efforts.[57] On one hand, AI equips organizations with powerful tools to detect and respond to cyber threats with unparalleled speed and precision. On the other hand, its adoption introduces new vulnerabilities, providing opportunities for attackers to exploit. This article examines the dual nature of AI in cybersecurity, exploring its potential as both a friend and a foe in the fight against cyber threats.

To understand AI's role in cybersecurity, it is important to first define AI. AI refers to the simulation of human intelligence in machines, enabling them to perform tasks like understanding language, recognizing patterns, solving problems, and making decisions autonomously. Powered by technologies such as machine learning (ML), deep learning, natural language processing (NLP), and computer vision, AI systems can learn from data, interpret human language, and analyze visual information. Its applications span industries, including healthcare, finance, and automotive, but its integration into cybersecurity presents unique challenges and opportunities.



AI serves as a powerful tool for monitoring, analyzing, detecting, and responding to threats in real time. Unlike traditional cybersecurity measures, which often rely on predefined rules and human intervention, AI leverages machine learning algorithms to analyze vast amounts of data. It identifies patterns that signify potential threats and can analyze up to 5 trillion data signals daily, significantly enhancing threat detection and response capabilities. For instance, AI can monitor network traffic and flag anomalies indicative of phishing attempts or Distributed Denial of Service (DDoS) attacks. It automates routine tasks—up to 90%—allowing human analysts to focus on complex threats.[58] Resultantly, AI can detect 85% of cyber attacks, which is a substantial improvement over the 50% detection rate of traditional cybersecurity methods.[59] AI also powers tools such as intrusion detection systems (IDS) and endpoint detection and response (EDR), enabling organizations to neutralize attacks before they cause damage.[60] For example, AI can autonomously isolate compromised devices from a network, apply patches, or even conduct forensic analysis post-attack. This automation reduces response times and alleviates the burden

[57] The Role of AI in Cybersecurity | CrowdStrike. www.crowdstrike.com/en-us/cybersecurity-101/artificial-intelligence.
[58]Bhattacharya, Joydeep. "AI In Cybersecurity Statistics: Key Trends and Insights." SEO Sandwitch, 30 Nov. 2024, seosandwitch.com/ai-cybersecurity-stats.
[59]Bhattacharya, Joydeep. "AI In Cybersecurity Statistics: Key Trends and Insights." SEO Sandwitch, 30 Nov. 2024, seosandwitch.com/ai-cybersecurity-stats.
[60] The Role of AI in Cybersecurity | CrowdStrike. www.crowdstrike.com/en-us/cybersecurity-101/artificial-intelligence.

on human cybersecurity professionals, who are often overwhelmed by the sheer volume of alerts.[61] By transforming passive defenses into proactive strategies, AI makes it more challenging for cybercriminals to exploit vulnerabilities.

Ironically, while AI enhances cybersecurity defenses, as it becomes more integrated into infrastructure, it also introduces new vulnerabilities. Consequently, AI attracts growing attention from cyber attackers seeking to exploit its advanced technologies. One critical concern is the vulnerability of AI algorithms to adversarial attacks. These involve manipulating input data to produce incorrect or misleading outputs without altering the system's external behavior visibly. For example, an attacker might add imperceptible noise to an image, causing a facial recognition system to misidentify an individual. Data poisoning is another method, where malicious data introduced into training datasets influences AI behavior, potentially teaching a system to overlook threats or misclassify them as benign.[62] Additionally, model inversion attacks allow hackers to reverse-engineer AI models to extract sensitive information, posing severe privacy risks.

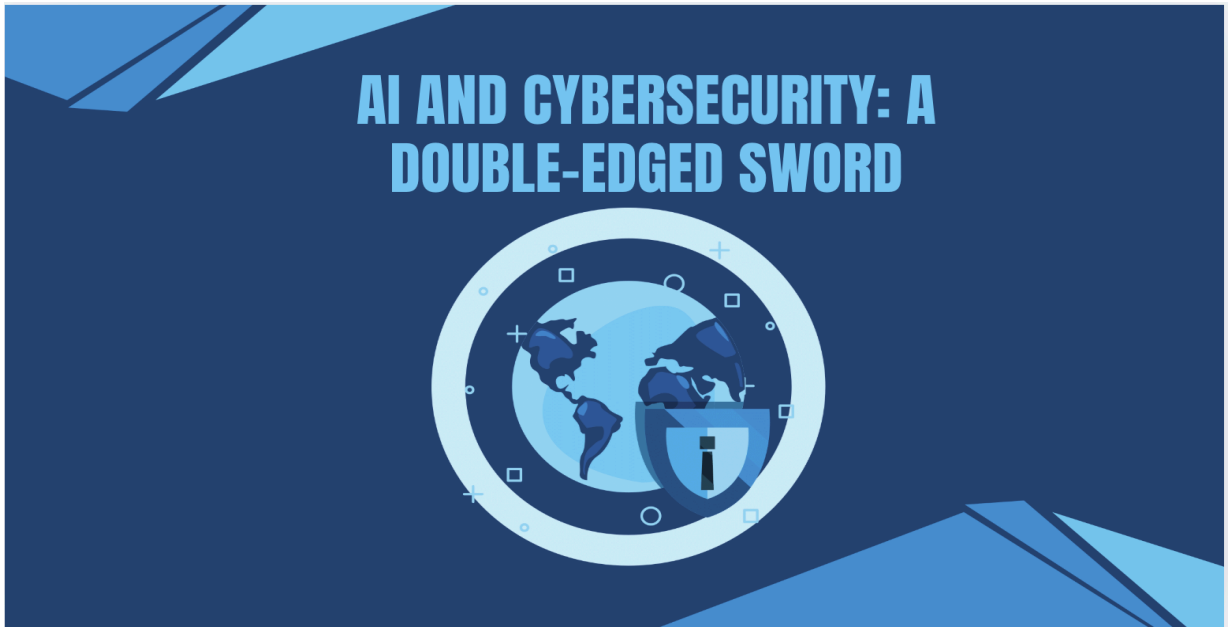
AI can be used by cybercriminals to craft sophisticated and more covert attacks. One example is the use of AI-generated phishing emails. Unlike traditional phishing (the fraudulent practice of sending emails or other messages purporting to come from reputable companies in order to induce individuals to reveal personal information, such as passwords and credit card numbers) which often relies on generic, poorly written messages, AI can craft personalized, convincing emails by analyzing publicly available data about the target. These highly tailored attacks, known as spear phishing, significantly increase the likelihood of success.[63] AI-enhanced malware can adapt its behavior to evade detection by security systems. For instance, it can change its code to avoid signature-based detection or mimic legitimate software processes to blend into its environment. Additionally, attackers use AI to identify vulnerabilities in software, automating the process of discovering and exploiting weaknesses.[64]

Deepfake technology, another alarming development, allows cybercriminals to create convincing audio and video forgeries causing financial losses, operational disruptions, and reputational harm across multiple industries. In 2024, deepfake technology ushered in a new era of cyber threats.[65] Similarly, deepfake audio has been used to impersonate executives, leading to fraudulent fund transfers. In 2023, deepfake fraud attempts accounted for 6.5% of total fraud attempts, marking a 2,137% increase over the past three years.[66] In 2023, a deepfake video falsely depicted Singapore's Prime

[61] "AI In Cybersecurity: Key Benefits, Defense Strategies, and Future Trends." Fortinet, www.fortinet.com/resources/cyberglossary/artificial-intelligence-in-cybersecurity.
[62] Boutin, Chad. "NIST Identifies Types of Cyberattacks That Manipulate Behavior of AI Systems." NIST, 4 Jan. 2024, www.nist.gov/news-events/news/2024/01/nist-identifies-types-cyberattacks-manipulate-behavior-ai-systems.
[63] "FBI Warns of Increasing Threat of Cyber Criminals Utilizing Artificial Intelligence." FBI, 8 May 2024, www.fbi.gov/contact-us/field-offices/sanfrancisco/news/fbi-warns-of-increasing-threat-of-cyber-criminals-utilizing-artificial-intelligence.
[64] Most Common AI-Powered Cyberattacks | CrowdStrike. www.crowdstrike.com/en-us/cybersecurity-101/cyberattacks/ai-powered-cyberattacks.
[65] Keepnet Labs. "Deepfake Statistics and Trends About Cyber Threats 2024." Keepnet Labs, 5 Dec. 2024, keepnetlabs.com/blog/deepfake-statistics-and-trends-about-cyber-threats-2024.
[66] Keepnet Labs. "Deepfake Statistics and Trends About Cyber Threats 2024." Keepnet Labs, 5 Dec. 2024, keepnetlabs.com/blog/deepfake-statistics-and-trends-about-cyber-threats-2024.

Minister Lee Hsien Loong endorsing a cryptocurrency platform, leading to public confusion and prompting the Prime Minister's Office to issue a statement debunking the video.[67] As these technologies become more accessible, the sophistication and frequency of AI-driven cybercrimes are likely to rise.

Balancing AI's potential with its risks requires vigilance, innovation, and collaboration. Organizations must secure AI systems with robust encryption, access controls, and regular audits. Developing explainable AI models can help identify anomalies in decision-making processes, enhancing trust and security for users, stakeholders, and organizations interacting with or relying on these systems. Collaboration between governments, private sectors, and academic institutions are essential for establishing standards and sharing threat intelligence.[68] Investments in resilient AI algorithms and defense mechanisms are also crucial and have already shown some success as seen in the case of organizations utilizing AI email scanning tools having experienced a 35% decline in phishing attempts. Finally, fostering a culture of cybersecurity awareness and educating users about AI-related risks can reduce human vulnerabilities exploited by attackers. Societies can harness AI to create a safer cyberspace, minimizing its potential for harm while maximizing its benefits.



[67]Keepnet Labs. "Deepfake Statistics and Trends About Cyber Threats 2024." Keepnet Labs, 5 Dec. 2024, keepnetlabs.com/blog/deepfake-statistics-and-trends-about-cyber-threats-2024.

[68] Plankey, Sean. "How AI Creates Cybersecurity Vulnerabilities – and What to Do About It." WTW, 26 Aug. 2024, http://www.wtwco.com/en-us/insights/2024/08/how-ai-creates-cybersecurity-vulnerabilities-and-what-to-do-about-it.

AI IN CONFLICT

Amaya Parekh - *UNIS*

In recent years, the world has seen a surge in the development of artificial intelligence, resulting in the integration of AI into the daily lives of many. A significant aspect of this is the growing utilization of AI in conflict worldwide, which has various benefits and dangers. AI's potential applications in multiple types of conflict raise complex discussions. AI usage within conflict can be divided between its usage for military tools versus humanitarian aid, preserving the lives of those affected by any given conflict.[69]

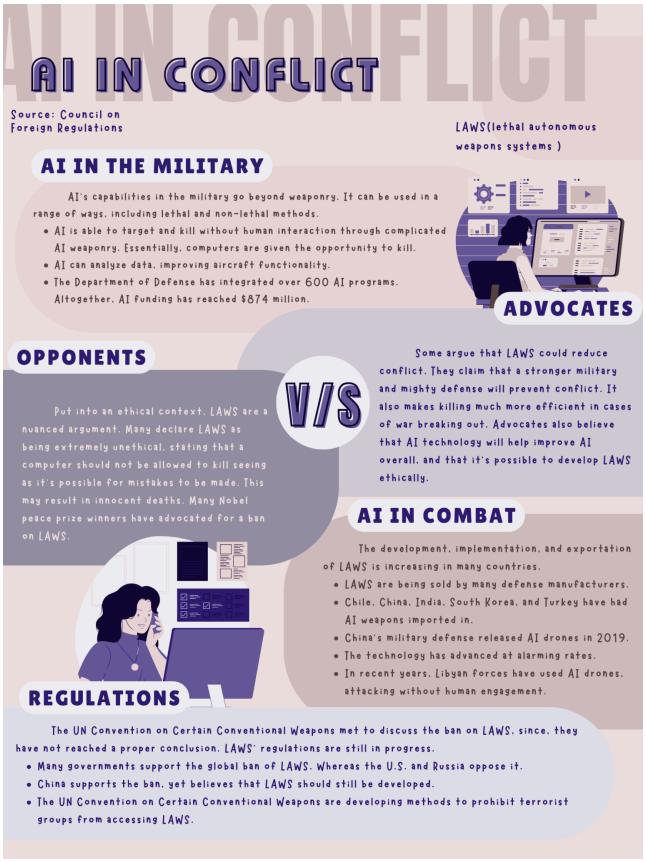
An example of AI being used to develop weaponry is within the 2022 Russia-Ukraine War. In this war, there has been significant development and usage of weapons that operate with artificial intelligence, an example being autonomous drones. These machines are automated yet can fixate on targets, operating through guided software. Drone development has spurred the creation of AI weapons, driving further technological advances. Founder and chief developer of Swarmer, a Ukrainian startup tech company involved in AI drone development, Serhii Kuprienko states, "AI-powered drones can do in seconds what would take humans several hours, simply because we are slow to process a large volume of information."[70]

These types of weapons have proved critical to Ukrainian war efforts, however, they raised concerns of bodies like the UN, who fear the creation of a new global arms race.[71] Furthermore, in the rest of the world, autonomous weaponry has been developed beyond drones, including autonomous war vehicles and weapons systems. The US military has explicitly deployed AI-powered weaponry including robots and drones, and is only expected to advance as technology evolves. AI has begun to enter the world of weapon development, creating the potential for a new era of warfare.[72]

As technology has advanced further, there have been growing concerns regarding the ethics of using AI in conflict zones, and how regulations should proceed. According to the International Committee of the Red Cross (ICRC), these concerns include the dangers to human life posed by autonomous weapons and compromising human decision-making in conflict zones. Autonomous weapons, with the capacity to strike down targets at an increased efficiency rate, hold the capacity to escalate human casualties and overall loss of life within warfare.[73] Groups like Human Rights Watch have advocated for the outright ban of autonomous weapons, due to the "risk of death or injury to civilians during armed conflict" and the

[69] "ICRC Position Paper: Artificial Intelligence and Machine Learning in Armed Conflict: A Human-Centred Approach." *International Review of the Red Cross*, international-review.icrc.org/articles/ai-and-machine-learning-in-armed-conflict-a-human-centred-approach-913.
[70] Volpicelli, Gian, et al. ""Our Oppenheimer Moment" — in Ukraine, the Robot Wars Have Already Begun." *POLITICO*, 16 May 2024, www.politico.eu/article/robots-coming-ukraine-testing-ground-ai-artificial-intelligence-powered-combat-war-russia/.
[71] Mozur, Paul, and Adam Satariano. "A.I. Begins Ushering in an Age of Killer Robots." *The New York Times*, 2 July 2024, www.nytimes.com/2024/07/02/technology/ukraine-war-ai-weapons.html.
[72] Caruso, Catherine. "The Risks of Artificial Intelligence in Weapons Design." *Harvard.edu*, 7 Aug. 2024, hms.harvard.edu/news/risks-artificial-intelligence-weapons-design.
[73] International Committee Of The Red Cross. "What You Need to Know about Artificial Intelligence in Armed Conflict." *Www.icrc.org*, 5 Oct. 2023, www.icrc.org/en/document/what-you-need-know-about-artificial-intelligence-armed-conflict.

violation of international rules of conduct regarding war policy.[74] An additional risk is the questions that AI targeting systems raise about machine versus human decision-making in conflict, particularly regarding life-or-death choices.



Conversely, there have been countless demonstrated uses of AI to aid humanitarian causes. An example of this is once more within the Russia-Ukraine war; AI has been crucial in responding to the influx of refugees created by the conflict. In a collaboration between IMPACT and Data for Good at Meta, AI displacement models have been used to gather data, including the total number of people forced to leave Ukraine, the gender and age statistics of this group, and the countries they've fled to. This data has been essential to the refugee response, allowing for the destination countries to help with immediate registration and decrease the delay period.[75] In other parts of the world, artificial intelligence is helpful within humanitarian aid for many similar reasons, such as its capacity to efficiently collect, report, and analyze large amounts of data. According to the United Nations Office for the Coordination of Humanitarian Affairs, AI allows for "analysis at an unprecedented scale. This can support a shift towards proactive, data-driven approaches in the humanitarian sector". In enhancing labor-intensive efforts and increasing efficiency by optimizing data, AI can improve both the speed and efficiency at which humanitarian efforts are carried out within conflict zones, potentially allowing for the preservation of human life and decreasing casualties.[76]

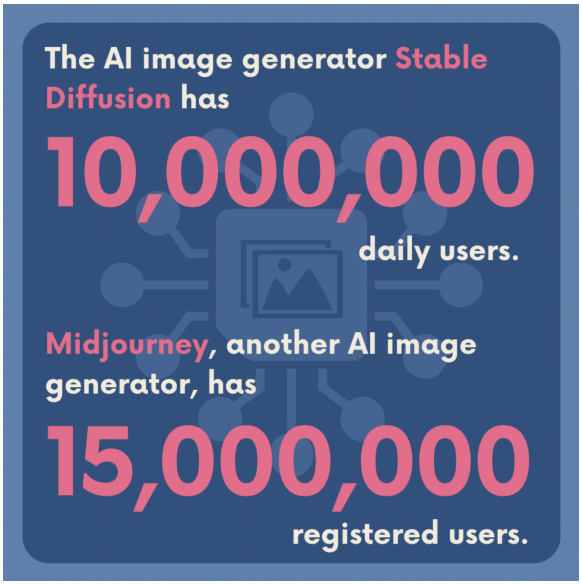
The dual usage of artificial intelligence demonstrates potential within global conflicts to develop weapons and simultaneously promote humanitarian causes. This duality paints how the future of AI within conflict zones entirely depends on human usage and intent. The field of AI within conflict is perpetually evolving and shifting, and as time progresses, regulations about AI in conflict zones continue to adapt. The importance of a "human-centered" approach to AI within conflict continues to be stressed, along with the importance of responsible usage of this new element within global conflict.[77]

[74] Docherty, Bonnie. "Losing Humanity | the Case against Killer Robots." *Human Rights Watch*, 10 July 2019, www.hrw.org/report/2012/11/19/losing-humanity/case-against-killer-robots.
[75] "Using Big Data and AI to Support the Ukraine Refugee Response - a Collaboration between IMPACT Initiatives and Data for Good at Meta - Ukraine." *ReliefWeb*, 23 Feb. 2024, reliefweb.int/report/ukraine/using-big-data-and-ai-support-ukraine-refugee-response-collaboration-between-impact-initiatives-and-data-good-meta. Accessed 20 Dec. 2024.
[76] "Briefing Note on Artificial Intelligence and the Humanitarian Sector | OCHA." *Www.unocha.org*, 17 Apr. 2024, www.unocha.org/publications/report/world/briefing-note-artificial-intelligence-and-humanitarian-sector.
[77] ICRC. "Artificial Intelligence and Machine Learning in Armed Conflict: A Human-Centred Approach." *Www.icrc.org*, 5 June 2019, www.icrc.org/en/document/artificial-intelligence-and-machine-learning-armed-conflict-human-centred-approach.

AI IN ARTS

Basil Moore - *UNIS*

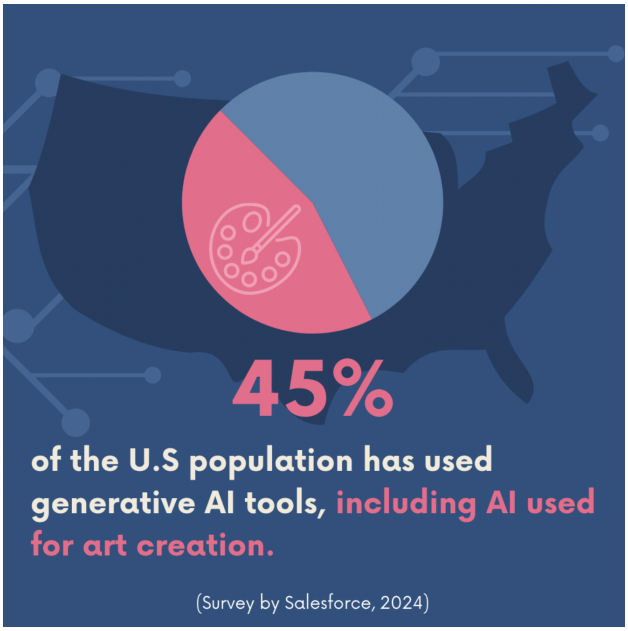
Art generated by artificial intelligence software is becoming increasingly present in our everyday lives, with more and more people finding it a cost-effective, accessible, and efficient way to generate film, music, visual art, song lyrics, and other types of art. A 2024 survey by Salesforce has found that 45% of the U.S population surveyed had used generative AI, which includes AI tools used to generate art.[78]Additionally, AI image generator Stable Diffusion has over 10 million daily users, and Midjourney, another AI image generator, has nearly 15 million registered users.[79] Film industry experts have predicted that they expect at least one film to be 90% AI-generated by 2030.[80] With AI's transition from performing simple tasks to creating original content comes a variety of ethical and legal questions pertaining to the relationship between generative AI and copyright and intellectual property law. AI Art has created a large amount of gray area in the law, and the decisions that are made regarding its legality will affect the livelihoods of artists as AI becomes even more present in our lives.



One of these issues is how AI relates to copyright and intellectual property law. Currently, only works created by humans are protected by copyright law in most countries.[81] This raises the question of whether AI art should be eligible for copyright protection, and, in that case, who owns it. For a work of art to be eligible, it needs a defined human author, which is not clear-cut with AI art. The author could be defined as the developer who made the AI software, the owner of the software, or the person who input the prompt that generated the piece of art. In September of 2022, the U.S Copyright Office granted registration to a graphic novel named Zarya of the Dawn by Kristina Kashtanova, which was a book generated using the text-to-image generator Midjourney.[82] A few months later, the office retracted this decision, citing non-human authorship that they took into account, though the book's text remained protected. Since, the U.S Copyright Office has implemented a policy change, saying that the

[78] "Top Generative AI Statistics for 2024." *Salesforce,* September 2023, https://www.salesforce.com/news/stories/generative-ai-statistics/#:~:text=75%25%20of%20generative%20AI%20users,about%20topics%20that%20interest%20them. Accessed 20 December 2024.
[79] Katatikarn, Jasmine. "AI Art Statistics: The Ultimate List in 2024." *Academy of Animated Art,* 15 February 2024, https://academyofanimatedart.com/ai-art-statistics/. Accessed 20 December 2024.
[80] Wiles, Jackie. "Beyond ChatGPT: The Future of Generative AI for Enterprises." *Gartner,* 26 January 2023, https://www.gartner.com/en/articles/beyond-chatgpt-the-future-of-generative-ai-for-enterprises. Accessed 20 December 2024.
[81] Holloway, Jim, et al. "Will Copyright Law Enable or Inhibit Generative AI?" *World Economic Forum,* 13 January 2024, https://www.weforum.org/stories/2024/01/cracking-the-code-generative-ai-and-intellectual-property/#:~:text=As%20artificial%20intelligence%20(AI)%20moves,are%20protected%20by%20copyright%20laws. Accessed 20 December 2024.
[82] Edwards, Benj. "Artist Receives First Known US Copyright Registration for Latent Diffusion AI Art." *ArsTechnica,* 22 September 2022, https://arstechnica.com/information-technology/2022/09/artist-receives-first-known-us-copyright-registration-for-generative-ai-art/. Accessed 20 December 2024.

term “author” does not extend to AI, and that merely inputting a prompt to generate AI content does not constitute copyright.[83]



An additional problem raised by AI art pertains to copyright infringement. AI image generators use machine learning to create their images and are fed millions of images created by real artists to enable this process. This raises issues for many artists since their art is copyrighted, and many have claimed that the use of their art to feed these AI models constitutes copyright infringement. Currently, AI art is protected by fair use law in the United States.[84] However, many pending lawsuits by companies in different artistic industries may change that. In 2023, Universal Music Group targeted the company Anthropic, claiming that they used copyrighted song lyrics to train their generative AI software Claude AI.[85] Also in the music industry, lawsuits have been filed by major record labels like Sony Music Entertainment and Warner Music Group against AI music startups Suno and Uncharted Labs for using copyrighted music to train their models, which can create songs from text prompts.[86] Regarding visual arts, Getty Images is currently suing Stability AI for copying and processing millions of images owned by their company and protected by their copyright.[87]

The final major issue regarding AI art is its ability to detract from the commissions of human artists while using their art to train their software. As the number of people using AI to produce music, art, and film increases, many believe that human artists will face a decrease in income and work in their industries. In 2023, Artists Sarah Anderson, Kelly McKernan, and Karla Ortiz filed a class-action lawsuit against Stability AI and Midjourney, which use the software Stable Diffusion to generate images. They claimed their works were used to train Stable Diffusion, and that the images generated in their style directly compete with their own art.[88] AI images and art generated in the style of an existing artist can be sold on the internet, which takes commissions from the artists themselves, devaluing their work in the industry.

[83] Brittain, Blake. “AI-Created Images Lose U.S Copyrights in Test for New Technology.” *Reuters,* 22 February 2023, https://www.reuters.com/legal/ai-created-images-lose-us-copyrights-test-new-technology-2023-02-22/. Accessed 20 December 2024.
[84] Glover, Ellen. “AI-Generated Content and Copyright Law: What We Know.” *Built-In,* 18 September 2024, https://builtin.com/artificial-intelligence/ai-copyright#:~:text=For%20a%20product%20to%20be,work%20of%20a%20human%20creator. Accessed 20 December 2024.
[85] Brittain, Blake. “Music Publishers Fire Back at Anthropic in AI Copyright Lawsuit.” *Reuters,* 15 February 2024, https://www.reuters.com/legal/litigation/music-publishers-fire-back-anthropic-ai-copyright-lawsuit-2024-02-15/. Accessed 20 December 2024.
[86] Yang, Angela. “U.S Record Labels are Suing AI Music Generators, Alleging Copyright Infringement.” *NBC News,* 24 June 2024, https://www.nbcnews.com/tech/tech-news/us-record-labels-are-suing-ai-music-generators-alleging-copyright-infr-rcna158660. Accessed 20 December 2024.
[87] “Getty Images Statement.” *Getty Images,* 17 January 2023, https://newsroom.gettyimages.com/en/getty-images/getty-images-statement. Accessed 20 December 2024.
[88] Dixit, Pranav. “Meet the Three Artists Behind a Landmark Lawsuit Against AI Art Generators.” *Buzzfeed News,* 20 January 2023, https://www.buzzfeednews.com/article/pranavdixit/ai-art-generators-lawsuit-stable-diffusion-midjourney?sa=D&sa=D&scrlybrkr=6e121c3e. Accessed 20 December 2024.

This lawsuit was successful, with U.S District Judge William Orrick upholding all claims of copyright infringement and trademark in this case in August of 2024.[89] Ben Zhao, professor of Computer Science at the University of Chicago, said that because of AI, artists may see not only a loss of income but a loss of artistic identity as well. He noted that some artists may stop promoting their art online to prevent their art from being fed to AI generators.[90]

In conclusion, the increasing usage of artificial intelligence to generate works of art has generated many ethical and legal questions about AI's relationship to copyright law and the artists whose job it replaces. An informed look at AI art's eligibility for copyright, legality, and impact on the lives of artists is important as its usage by the art industry and its clients increases.

[89] Cho, Winston. "Artists Score Major Win in Copyright Case Against AI Art Generators." *The Hollywood Reporter,* 13 August 2023, https://www.hollywoodreporter.com/business/business-news/artists-score-major-win-copyright-case-against-ai-art-generators-1235973601/. Accessed 20 December 2024.
[90] Wakelee-Lynch, Joseph. "AI's Impact on Artists." *LMU Magazine,* 26 April 2023, https://magazine.lmu.edu/articles/mimic-master/. Accessed 20 December 2024.

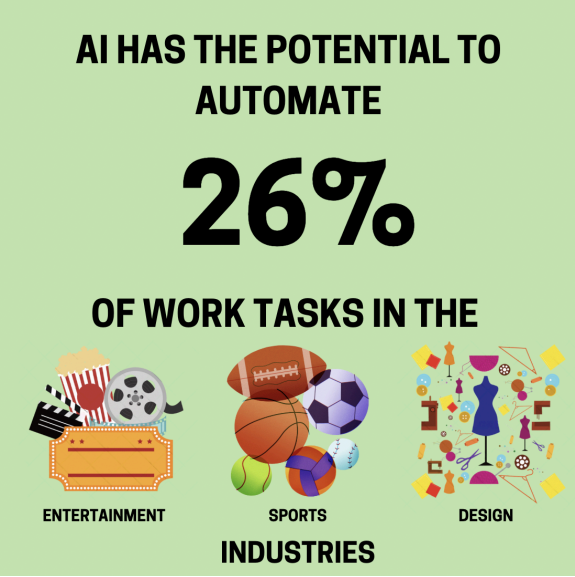
AI IN ARTS - VISITING SCHOOL CONTRIBUTION

Arabella Joaquin - *Crossroads School for Arts and Sciences*

What do a Drake song, the artwork of Van Gogh, and Tom Brady all have in common? They have been replicated by artificial intelligence, AI. The pursuit of creativity has always been regarded as a hallmark of the human experience, with behavioral researchers at Harvard Business Report calling creativity "the human masterpiece." [91] However, in the ever-advancing technological industry, Forbes notes generative AI as a double-edged sword for the creator economy. [92]

Generative AI such as ChatGPT and DALL-E is in its infancy. It is currently affecting both freelance and salaried professionals in the creative world. The Guardian reports that AI will not be a threat to employment in the creative industry. However, the idea that AI Models can now produce audio, images, and text based on user feedback and datasets is reasonably controversial for jobs that are centered around delivering creative content. So while it is yet to say what AI holds for the creative world in regards to employment, Harvard Business Report states that three potential scenarios provide the framework for what might happen in the future.[93]

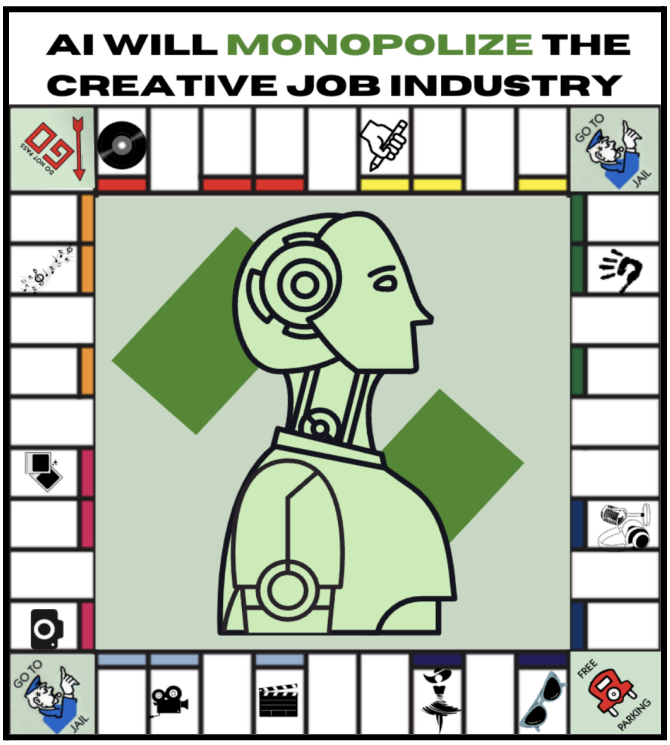
One possibility is that AI will monopolize the creative job industry. The podcast website Dudsey brought back comedian George Carlin from the dead by releasing an hour-long AI-generated Carlin that makes jokes in the same signature style, however, in a 2024 edition. According to Forbes, Dudsey released a special featuring an AI-generated Tom Brady joking about dating apps and football.[94] Brady then threatened legal action if Kultgen and Sasso didn't take down the video. After this, the SAG-AFTRA union (an actors guild) went on strike, where actors demanded to ensure that their talents would not be utilized without their permission. The Harvard Business report highlights that laws have not caught up with the technological progress made in the field of AI research.[95] This discrepancy of generative AI creates uncertainty regarding governments writing new laws based on intellectual



[91] De Cremer, David, et al. "How Generative AI Could Disrupt Creative Work." Harvard Business Review, 13 Apr. 2023, hbr.org/2023/04/how-generative-ai-could-disrupt-creative-work.
[92] Arwa Mahdawi, and Mona Chalabi. "What Jobs Will Still Be Around in 20 Years? Read This to Prepare Your Future." The Guardian, The Guardian, 15 Sept. 2017, www.theguardian.com/us-news/2017/jun/26/jobs-future-automation-robots-skills-creative-health.
[93] De Cremer, David, et al. "How Generative AI Could Disrupt Creative Work." Harvard Business Review, 13 Apr. 2023, hbr.org/2023/04/how-generative-ai-could-disrupt-creative-work.
[94] Hutchinson, Clare, and Phil John. "AI: Digital Artist's Work Copied More Times than Picasso." BBC News, 19 July 2023, www.bbc.com/news/uk-wales-66099850.
[95] "School Manager by Family Zone." Trendsresearch.org, 2025, trendsresearch.org/insight/copyright-ownership-in-the-age-of-ai/?srsltid=AfmBOoof2iN0bTYafp9Z8WRad-hvAjJk4jfQP9qiB-rmohNCjmQ230_X. Accessed 22 Jan. 2025.

property for pure human creation while balancing incentives for technical innovation.[96]

Oxford researcher Madoc Wade explains, "AI will be seized upon for its ability to provide an inexpensive but adequate product compared to more expensive processes which require deep human creativity."[97] So in short, an instrumental threat results from AI replacing viable opportunities for creative work, not because AI is more creative.[98] Instead, AI is more efficient and cheaper in meeting business needs. Innovation may decline over time as people produce less original media and art. Both the Harvard Business Report and Oxford Researcher agree that creators are already in competition with limited human attention, and this will intensify as AI makes it possible for creators to produce endless, on-demand content. Research from Goldman Sachs indicates that generative AI has the potential to automate 26% of work tasks in the arts, design, entertainment, media, and sports sectors. Even major food manufacturers such as Heinz and Nestle have used open AI tools such as Dall-E to create content in advertising campaigns.



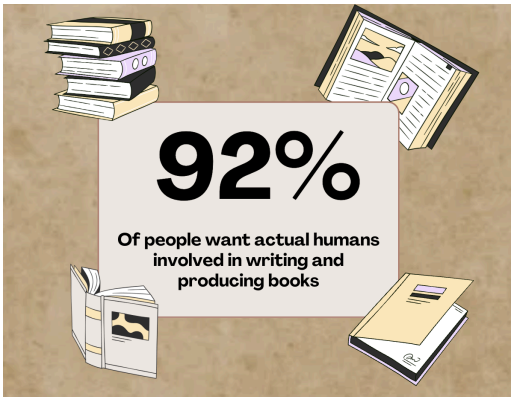
Even within this scenario humans still play a vital role in curating and advocating already existing content. The next possible case is AI being implemented as assistance to enhance the creative process, streamlining people's jobs rather than replacing them entirely. A report from the Washington Post shows that aside from the arts, AI is being used in an array of job fields from advising physicians during surgery to customer service calls.[99] Pieter den Hamer, VP of Research at Gartner, emphasizes, "Every job will be impacted by AI. However, the focus is primarily on augmentation, not replacement."[100] For instance, Dall-E is already being used by filmmakers, designers, and advertising execs. Now that generative AI platforms are public, businesses are learning how to utilize those platforms to their advantage. In 2023, a management consultancy, McKinsey and Company, studied how AI could be an opportunity to elevate

[96] Hüseyin Kambur, and Ayhan Dolunay. "A Research on Copyright Issues Impacting Artists Emotional States in the Framework of Artificial Intelligence." Frontiers in Psychology, vol. 15, 7 Aug. 2024, https://doi.org/10.3389/fpsyg.2024.1409646.
[97] "Is AI a Threat to Human Creativity? | Ethics in AI." Ox.ac.uk, 2024, www.oxford-aiethics.ox.ac.uk/ai-threat-human-creativity.
[98] Steynberg, Dirk. "The Ethical Implications of AI on Creative Professionals." Medium, July 2024,

[99] Torkington, Simon. "Creative Industries Are Adapting to the Arrival of Generative AI." World Economic Forum, 9 May 2023, www.weforum.org/stories/2023/05/generative-ai-creative-jobs/.
[100] Abril, Danielle. "AI Isn't yet Going to Take Your Job — but You May Have to Work with It." Washington Post, 20 Mar. 2023, www.washingtonpost.com/technology/interactive/2023/ai-jobs-workplace/.

fashion business.[101] McKinsey and Company saw applications that extend far beyond task automation but instead saw opportunities to increase productivity in product development, marketing, and customer experience research.[102] In addition to this, McKinsey and Company implemented generative AI to analyze seemingly disparate data to produce fresh insights that can benefit creative businesses as a whole.

The third possible scenario is that there could be a "techlash" against generative AI, as people might find the talent of authentic human artistry more valuable (Harvard Business Report). The Guardian wrote that "creative jobs would be safe from automation." A survey done by Wattpad and Wakefield Research found a whopping 92% of people want actual humans involved in writing and producing books.[103] According to Megan Poinski at Forbes, the same study found that 43% of participants worried that AI could potentially limit publication opportunities for authors.



In closing, artificial intelligence (AI) is progressing faster than those who created it can project. The developments in AI raise important questions about intellectual property, ethical use, and the preservation of authentic creative expression, even while it also presents enormous opportunities for efficiency and innovation. The success of creative jobs may depend more on how well humans integrate AI's capabilities while preserving the unique qualities of creativity that make the human experience special.

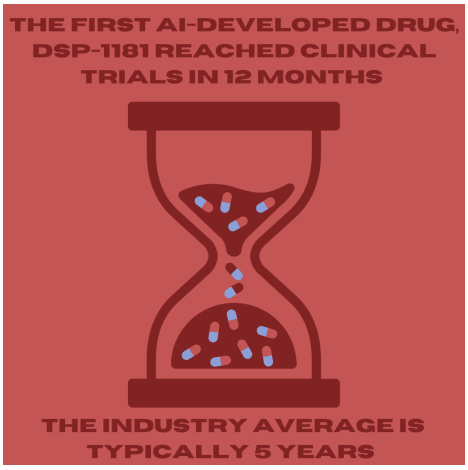
[101] Meier, Stephan. "Beyond the Binary: Rethinking the Role of AI in Creative Industries | Columbia Business School." Columbia Business School, 11 Jan. 2024, business.columbia.edu/insights/digital-future/beyond-binary-rethinking-role-ai-creative-industries.
[102] Fortino, Andres. "Embracing Creativity: How AI Can Enhance the Creative Process." NYU School of Professional Studies, 2 Nov. 2023, www.sps.nyu.edu/homepage/emerging-technologies-collaborative/blog/2023/embracing-creativity-how-ai-can-enhance-the-creative-process.html.
[103] Engine Creative. "We Asked 113 Creatives Their Opinion on the Impact of AI." Engine Creative, 26 Apr. 2023, www.enginecreative.co.uk/blog/artificial-intelligence-in-the-creative-industry/.

AI IN HEALTH

Mia Kalra - *UNIS*

Artificial Intelligence has recently surged in popularity in the workforce. In 2017, 20% of organizations had incorporated AI into at least one business function. Now, 72% of companies are utilizing AI, and many have come to depend on it.[104] With its increased usage, AI has brought advancements to every field, especially in the healthcare industry. AI has improved healthcare accessibility, efficiency, and accuracy, revolutionizing everything from drug discovery to patient care. While AI technologies offer significant opportunities for reducing healthcare disparities and outcomes, they also present complex challenges regarding ethics and privacy, and there are several risks associated with each new implementation of AI in the field.

AI's transformative impact on healthcare is perhaps most evident in its use and acceleration in drug discovery and development, producing 164 investigational drugs. The first AI-developed drug, DSP-1181, was released by Exscientia in January 2020. The drug treats Obsessive Control Disorder and notably reached clinical trials in just 12 months[105]—a process that usually takes around five years—highlighting AI's remarkable ability to expedite drug development.

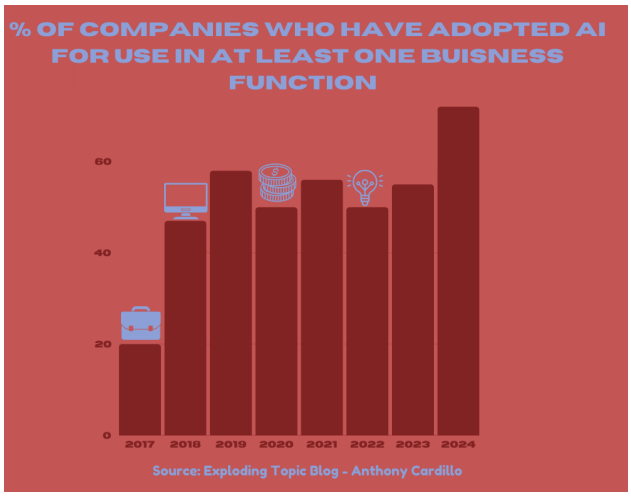


AI further streamlines the drug discovery process by imitating clinical trials and predicting their outcomes. Researchers from the University of Illinois Urbana-Champaign developed an AI-driven algorithm called Hierarchical Interaction Network (HINT) that predicts trial results based on multi-module data.[106] The data includes drug modules, target disease, and patient eligibility criteria.[107] The network helps in the identification of promising drug candidates before beginning expensive trials.[108] AI can also repurpose drugs or find new uses for existing drugs. A notable example is Baricitinib, a drug used to treat rheumatoid arthritis that AI technologies discovered as a potential COVID-19 treatment.[109] The integration of AI and drug discovery has been successful, reducing costs and saving time.[110]

[104]Cardillo, Anthony. "How Many Companies Use AI? (New Data)." *Exploding Topics*, 21 Aug. 2024, explodingtopics.com/blog/companies-using-ai.
[105]Albert, Helen. "These Six Biotechs Are Winning the Race to Get AI-Designed Drugs to the Clinic." *Inside Precision Medicine*, 16 Aug. 2022, www.insideprecisionmedicine.com/news-and-features/these-six-biotechs-are-winning-the-race-to-get-ai-designed-drugs-to-the-clinic/.
[106]Fu, Tianfan et al. "HINT: Hierarchical Interaction Network for Clinical-Trial-Outcome Predictions." *Patterns (New York, N.Y.)* vol. 3,4 100445. 3 Feb. 2022, doi:10.1016/j.patter.2022.100445
[107]Hutson, Matthew. "How AI Is Being Used to Accelerate Clinical Trials." *Nature*, 13 Mar. 2024, www.nature.com/articles/d41586-024-00753-x.
[108]How Successful Are AI-discovered Drugs in Clinical Trials? A First Analysis and Emerging Lessons." *Science Direct*, 30 Apr. 2024, www.sciencedirect.com/science/article/pii/S135964462400134X#:~:text=AI%20techniques%20are%20making%20inroads,these%20molecules%20in%20clinical%20trials.
[109] "Where Is AI Winning in Drug Discovery? 4 Use Cases to Know." *Fierce Biotech*, 16 Dec. 2024, www.fiercebiotech.com/sponsored/where-ai-winning-drug-discovery-4-use-cases-know-0.
[110]Shaheen, Mohammed Yousef. "Applications of Artificial Intelligence (AI) in Healthcare: A Review – ScienceOpen." *Science Open*, 25 Sept. 2021, www.scienceopen.com/hosted-document?doi=10.14293/S2199-1006.1.SOR-.PPVRY8K.v1.

Another prominent example of AI usage in healthcare is diagnoses, as AI can analyze patient information such as symptoms, results, and histories, which helps doctors make more informed decisions. For example, AI can recognize patterns in symptoms and results that might have been missed otherwise. AI even outperforms traditional methods, including the Modified Early Warning Score (MEWS), which is commonly used to calculate the risk of patient decline.[111] Furthermore, AI has been utilized to interpret medical images, such as MRIs, CT scans, and X-rays. Often, AI can highlight abnormalities more accurately and efficiently than human radiologists. AI's capability of processing data has led to almost 400 approvals from the FDA in the field of radiology.[112]

AI has also significantly expanded access to healthcare. AI-powered telemedicine platforms enable virtual consultations, making healthcare more accessible to those living in rural or unserved areas. AI-programmed chatbots can schedule appointments, provide simple healthcare information, and even offer medication reminders. Additionally, AI has been implemented into wearable devices to monitor patients' vital signs in real time, alerting healthcare providers of abnormalities. The devices mean patients can receive care even without visiting a clinic—a significant benefit for those without direct access to medical specialists.

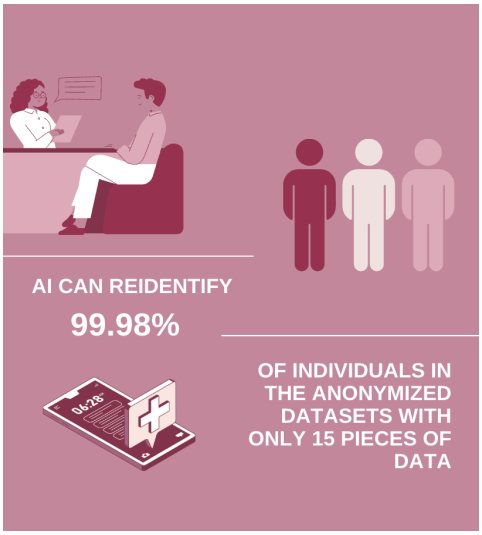


Although AI has propelled healthcare, it raises numerous risks and concerns regarding privacy. AI systems require substantial patient data to work correctly. While healthcare workers usually try to keep the data anonymous, the data can still be re-identified, especially when combined with other sources. A 2019 study revealed how AI could re-identify 99.98% of individuals in the anonymized datasets with only 15 pieces of data.[113] These datasets frequently contain genetic information, lifestyle information, and medical histories. Any lapse in data security can result in significant privacy violations and the potential misuse of personal data. It is also common for data to be shared between hospitals, research institutions, and tech companies in AI-driven healthcare. Unfortunately, many patients may not be aware of how the systems are using their data and may not be able to give informed consent.[114]

Beyond privacy risks, AI systems could unintentionally have biases from their training data, resulting in unfair treatment of marginalized groups. For example, a 2019 study found that an AI algorithm favored

[111]"How AI Is Improving Diagnostics, Decision-Making and Care." *American Hospital Association*, www.aha.org/aha-center-health-innovation-market-scan/2023-05-09-how-ai-improving-diagnostics-decision-making-and-care.
[112]"Revolutionizing Healthcare: How Is AI Being Used in the Healthcare Industry?" *Los Angeles Pacific University*, 21 Dec. 2023, www.google.com/
[113]Marshall, Sarah. "AI in Healthcare: Security and Privacy Concerns." *Lepide*, 17 Dec. 2024, www.lepide.com/blog/ai-in-healthcare-security-and-privacy-concerns/.
[114]Murdoch, Blake. "Privacy and Artificial Intelligence: Challenges for Protecting Health Information in a New Era." *BMC Medical Ethics*, 2021, bmcmedethics.biomedcentral.com/articles/10.1186/s12910-021-00687-3.

White patients over Black patients because it relied on historical healthcare spending as an indicator of health needs, thus ignoring the systemic biases that previously disadvantaged Black patients.[115]



Regulations are necessary to ensure that AI is implemented safely and ethically. Current laws may not be enough to cover all the issues of AI in healthcare, overlooking problems like data sharing. The Health Insurance Portability and Accountability Act (HIPAA) manages patient data, while Europe's General Data Protection Regulation (GDPR) serves a similar role. Both regulations focus on protecting identifiable patient information, but AI heavily relies on anonymized patient data. Neither covers the ethical implications of AI's decision-making. Although some countries are starting to implement guidelines focusing on AI in healthcare, such as the AI Act,[116] proposed by the European Union, more regulations are required to reduce ethical concerns and ensure patient safety.[117]

AI has undeniable advancements in healthcare. It has numerous positive impacts, such as drug discovery, expanding care access, and the development of treatment plans. However, it does pose ethical and privacy concerns. Nevertheless, the presence of AI is inevitable in today's technologically advanced society. The introduction of Artificial Intelligence has revolutionized healthcare entirely and will likely continue to do so.

[115] Obermeyer, Ziad, et al. "Dissecting Racial Bias in an Algorithm Used to Manage the Health of Populations." *Science Journal*, 25 Oct. 2019, www.science.org/doi/10.1126/science.aax2342.
[116] Ryan-Mosley, Tate, et al. "What's Next for AI Regulation in 2024?" *MIT Technology Review*, 5 Jan. 2024, www.technologyreview.com/2024/01/05/1086203/whats-next-ai-regulation-2024/amp/.
[117] Siafakas, Nikolaos et al. "Risks of Artificial Intelligence (AI) in Medicine." *Pneumon*, vol. 37, no. 3, 2024, 40. doi:10.18332/pne/1917386.

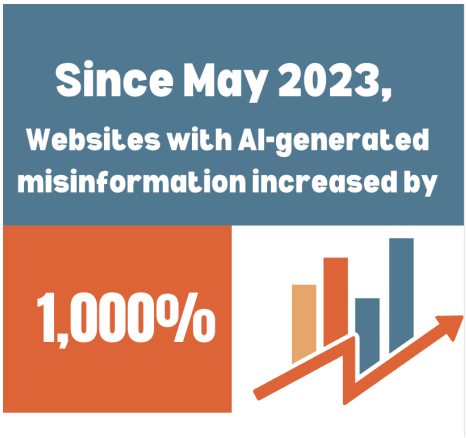
AI IN POLITICS

Jayden Link - *UNIS*

AI is transforming politics, offering both opportunities and challenges. AI-generated content, from deepfake videos to fake news, increasingly influences public opinion and voter behavior, raising concerns about its impact on democratic institutions. With significant elections in the past and coming years, understanding AI's role in disinformation and its societal implications is crucial to better understanding and communicating politics.

Since the 1700s, campaigns have used data to predict voter behavior, but its scale and speed have increased dramatically with AI. In the 2000s, *Big Data* allowed campaigns to personalize messages, a trend accelerated by social media and the 2008 Obama campaign. More recently, *Social Media Data Harvesting* has given campaigns access to vast consumer data from social media, enabling them to target voters with unprecedented precision.[118]

AI is driving the proliferation of fake news by automating the creation of false articles. Since May 2023, websites hosting AI-generated misinformation have increased by over 1,000%, from 49 to more than 600. Early examples have included a fabricated story about Israeli Prime Minister Netanyahu's psychiatrist that spread across various platforms and languages, Pro-Chinese propaganda distributed via AI-generated anchors and bot networks, and AI-generated voice clones used in Slovakia to portray politicians falsely.[119]



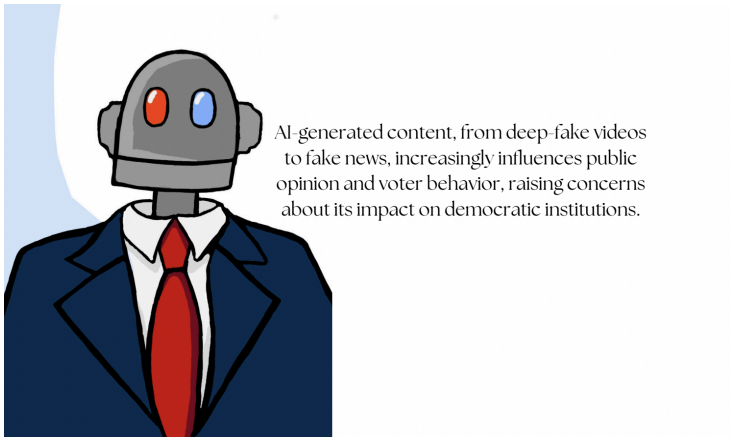
AI-generated disinformation disproportionately targets vulnerable groups, including women and marginalized communities, often exploiting societal biases to amplify prejudice and inequality. It has been used to create harmful deepfakes, such as explicit content or manipulated images of female protesters, undermining their credibility and deterring public participation. Unemployed youths frequently produce fake content for virality and monetization, contributing to an overwhelming influx of misinformation. The growing accessibility of generative AI tools makes disinformation harder to detect, undermining trust and media literacy, particularly in societies with low digital literacy.[120]

Campaigns and policymakers are reacting to the recent development of AI systems that can create lifelike images, videos, and sounds in seconds. However, attempts to manipulate or distort the media to sway an

[118]Rehagen, Tony. "Candidate AI: The Impact of Artificial Intelligence on Elections." *Emory Magazine*, Emory University, fall 2024, news.emory.edu/features/2024/09/emag_ai_elections_25-09-2024/index.html. Accessed 31 Dec. 2024.
[119]Verma, Pranshu. "The Rise of AI Fake News Is Creating a 'Misinformation Superspreader'." The Washington Post, 12 Dec. 2023, www.washingtonpost.com/technology/2023/12/17/ai-fake-news-misinformation/. Accessed 31 Dec. 2024.
[120]Adami, Marina. "How Ai-Generated Disinformation Might Impact This Year's Elections and How Journalists Should Report on It." Reuters Institute for the Study of Journalism, 15 Mar. 2024, reutersinstitute.politics.ox.ac.uk/news/how-ai-generated-disinformation-might-impact-years-elections-and-how-journalists-should-report.

election are not particularly new. AI impersonations may be covered under criminal impersonation statutes in some states that predate the Internet.[121]

Global efforts to regulate AI focus on ensuring its ethical use and alignment with human rights. The United Nations has led initiatives to develop international standards, including the 2024 UN General Assembly resolution, which promotes "safe, secure, and trustworthy" AI systems that respect human rights. The European Union has introduced the Artificial Intelligence (AI) Act, which categorizes AI systems by risk, imposing stricter regulations on high-risk systems and banning harmful practices like cognitive behavioral manipulation and predictive policing. The EU's broader regulatory strategy also includes the Code of Practice on Disinformation, which requires platforms to monitor political advertising, and the Digital Services Act, which ensures safer online environments. These efforts aim to mitigate AI's risks to democracy and promote responsible, transparent use in electoral processes.[122]



AI-generated content, from deep-fake videos to fake news, increasingly influences public opinion and voter behavior, raising concerns about its impact on democratic institutions.

Many people lack the skills to recognize fake content, exacerbated by the increasing sophistication of generative AI. Economic motivations drive misinformation, including gaining followers or financial profits from ad revenues.[123] For example, when pop star Justin Bieber, among many others, was fooled by a series of TikTok videos that appeared to feature actor Tom Cruise. These deepfakes were so convincing that Bieber, along with many viewers, believed they were authentic, thus showcasing the increasing sophistication of generative AI in creating hyper-realistic but entirely fabricated content.[124]

There are, however, also positive implications of AI. AI chatbots can help voters understand complex political information. It is a tool that can support smaller local campaigns to reach voters more effectively and can also assist with large-scale content moderation.[125] The positive implications of AI are undermined due to a lack of groundwork and by the absence of foundational trust and safeguards, which emphasize the complex and often contradictory role AI plays in politics. While it enhances political communication and engages voters, its capacity to spread misinformation and shape public opinion undermines democratic integrity.

[121]NCSL Editors . “Artificial Intelligence (AI) in Elections and Campaigns.” NCSL, www.ncsl.org/elections-and-campaigns/artificial-intelligence-ai-in-elections-and-campaigns. Accessed 31 Dec. 2024.

[122]"Can Artificial Intelligence (AI) Influence Elections?" *United Nations Regional Information Centre for Western Europe*, 7 June 2024, unric.org/en/can-artificial-intelligence-ai-influence-elections/. Accessed 31 Dec. 2024.

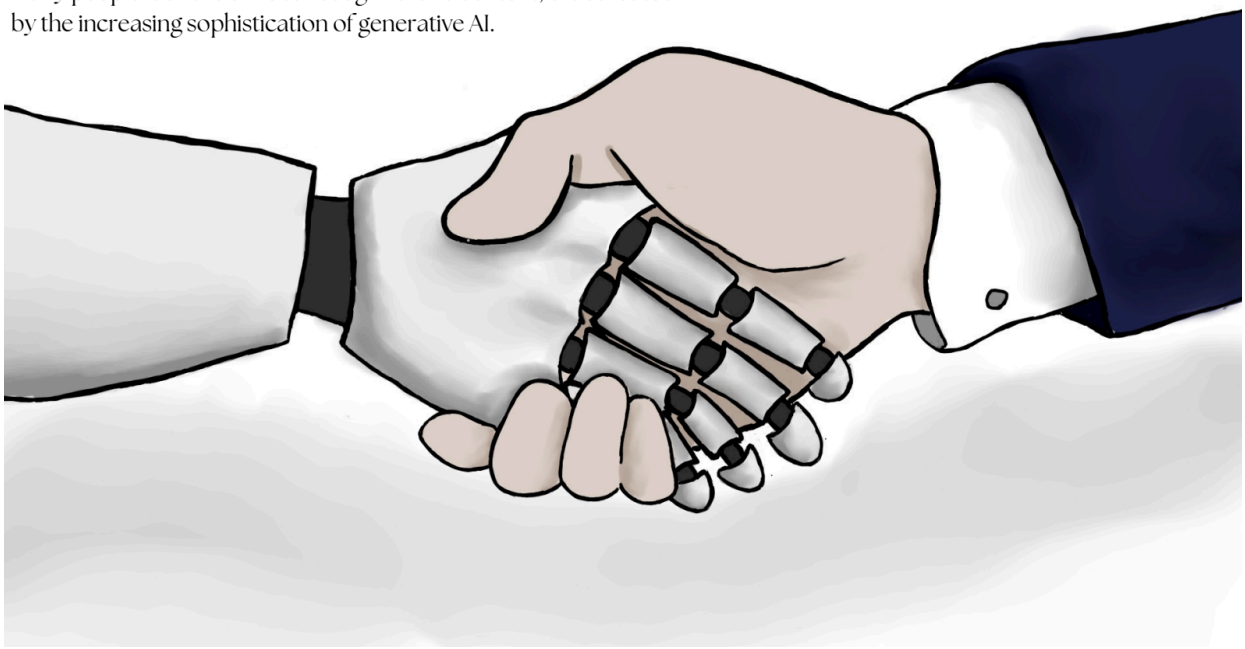
[123]Park, Hyun Jun. “The rise of generative artificial intelligence and the threat of fake news and disinformation online: Perspectives from sexual medicine.” *Investigative and clinical urology* vol. 65,3 (2024): 199-201. doi:10.4111/icu.20240015

[124] Farmer, Brit McCandless. "The Impact of Deepfakes: How Do You Know When a Video Is Real?" 60 Minutes, CBS News, 31 July 2022, https://www.cbsnews.com/news/deepfakes-real-fake-videos-60-minutes-2022-07-31/. Accessed 31 Dec. 2024.

[125] Cool, Kevin, and Andrew B. Hall. "Wreck the Vote: How AI-Driven Misinformation Could Undermine Democracy." *Stanford Graduate School of Business*, 16 Oct. 2024, www.gsb.stanford.edu/insights/wreck-vote-how-ai-driven-misinformation-could-undermine-democracy. Accessed 31 Dec. 2024.

To lay the groundwork for combating the negative implications of AI in politics, every democracy needs a minimum of trust and a shared understanding of what is happening. The lack of this is the reason behind the division caused by misinformation, which threatens our democratic institutions.[126] AI could significantly transform political campaigns and governance. It may optimize political messaging by analyzing vast data to craft more effective and targeted communications, potentially outpacing human consultants. AI could also create its political parties, generate platforms, and recruit candidates while autonomously generating campaign contributions through business ventures or targeted fundraising. Additionally, AI may coordinate policy outcomes across multiple jurisdictions, advocating for laws and influencing policymakers on a large scale. These advancements, however, still raise concerns about transparency, accountability, and the concentration of power, mainly if AI-driven influence is used to manipulate public opinion or political processes.[127]

Many people lack the skills to recognize fake content, exacerbated by the increasing sophistication of generative AI.



AI in politics holds much promise, but it also poses significant hazards. Its ability to spread misinformation and sway public opinion seriously threatens democratic integrity, even as it can improve political communication and increase voter engagement. Societies must establish strong regulatory systems and encourage digital literacy throughout their initiatives while fostering media trust. The ability to find a balance between maximizing AI's benefits and mitigating its inherent risks will determine how it is used in politics in the future.

[126]"How Do Artificial Intelligence and Disinformation Impact Elections?" Democracy in Question, Brookings Institution, 10 Oct. 2024. Brookings, Brookings Institution, www.brookings.edu/articles/how-do-artificial-intelligence-and-disinformation-impact-elections/. Accessed 31 Dec. 2024.

[127]Schneier, Bruce, and Nathan E. Sanders. "Six Ways That AI Could Change Politics." *MIT Technology Review*, Massachusetts Institute of Technology, www.technologyreview.com/2023/07/28/1076756/six-ways-that-ai-could-change-politics/. Accessed 31 Dec. 2024.

AI IN MISINFORMATION

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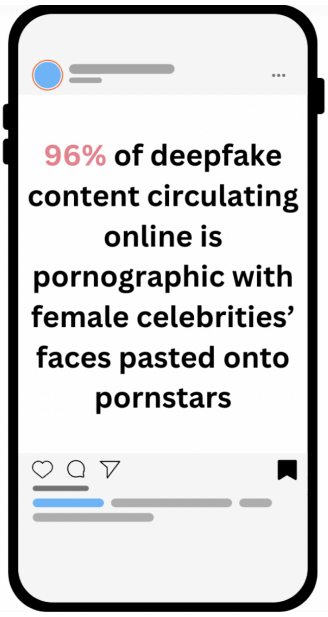
Disinformation and misinformation are widespread. Between 2013 and 2019, 96 foreign and domestic influence campaigns were carried out on social media, aiming to sway political outcomes in various countries by disseminating false information.[128] On February 20, 2020, the World Health Organization (WHO) declared a global epidemic defined as a "tsunami of information—some accurate, some not—that spreads alongside an epidemic."[129] The Infodemic was heightened due to an influx of deepfakes—realistic images, video, or audio content fabricated using AI technologies and "deep" machine learning, hence the name. While deep fakes share similarities with photo editors or online filters, they are fundamentally different due to their reliance on deep learning algorithms to create hyper-realistic, synthetic media virtually indistinguishable from authentic content. Although deepfakes can be harmless when used for purely entertainment purposes, such as making a version of Back to the Future starring the 2017 Spider-Man cast, they can also be used to promote misinformation, hate speech, and polarization of societies.



The advent of deepfakes coincided with expanding social media use and internet access, amplifying the spread of misinformation or disinformation (false information without the intention to cause harm and false information to cause harm, respectively). The number of global internet users has risen from 416 million in 2000 to 4.7 billion just 20 years later.[130] With the recent rise of deepfakes misinformation, and disinformation have increasingly become indistinguishable from real information. On a personal level, AI can be damaging because deepfake technology allows unskilled people to create non-consensual pornography used to embarrass, harass, and extort. The AI firm Diptrace reported that 96% of deepfake content circulating online is pornographic with female celebrities' faces pasted onto pornstars. Professor of law at Boston University Danielle Citron states that "deep face technology is being weaponized against women."[131]

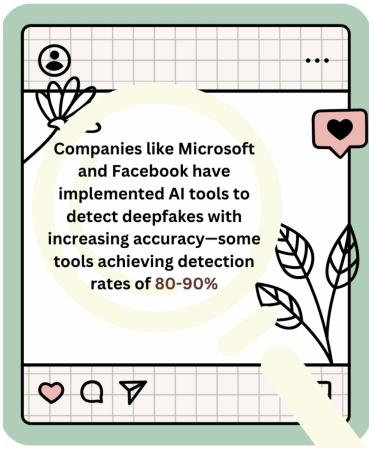
As the WHO outlined, the proliferation of deepfakes combined with the rapid growth of social media and digitalization made the spread of fake news during a global pandemic far more dangerous. Fake news alleging that alcohol, excessive heat, or excessive cold could protect against the virus permeated the internet despite no scientific evidence to support those claims.[132] Early during the pandemic, the Centers for Disease Control (CDC) reported from a survey that 39% of responders participated in in dangerous practices regarding exposure to household disinfectant products,

[128] Martin, Diego A, et al. "Introducing the Online Political Influence Efforts Dataset." *Journal of Peace Research*, 10 Nov. 2022, p. 002234332210928, https://doi.org/10.1177/00223433221092815. Accessed 20 Jan. 2023.
[129] "Call for Action: Managing the Infodemic." *Www.who.int*, 11 Dec. 2020, www.who.int/news/item/11-12-2020-call-for-action-managing-the-infodemic.
[130] Murphy, Julia, et al. "Internet." *Our World in Data*, 2023, ourworldindata.org/internet.
[131] Sample, Ian. "What Are Deepfakes – and How Can You Spot Them?" *The Guardian*, 13 Jan. 2020, www.theguardian.com/technology/2020/jan/13/what-are-deepfakes-and-how-can-you-spot-them.
[132] Group, Internet. "Deepfakes and the Healthcare Industry during COVID-19." *GlobalSign*, 2 Apr. 2024, www.globalsign.com/en/blog/in/how-deepfakes-could-further-burden-healthcare-industry-during-covid-19. Accessed 2 Jan. 2025.

including "washing food products with bleach, applying household cleaners directly to skin, and intentionally inhaling or ingesting disinfectants to prevent COVID-19 infection."[133]

The politicization of deepfakes—such as a video of Barack Obama calling Donald Trump a "complete dipshit"[134] or a video of Democratic politician Nancy Pelosi subtly slowed down so her speech appears slurred—illustrates the more concerning implications of AI and misinformation.[135] A study comparing the spread of fake and true news online found that misinformation on Twitter spreads 70% faster than real information, with false political news being the most viral.[136]

AI deep fakes also pose significant threats to international security. In March 2022, shortly after the Russian invasion of Ukraine, Russian propagandists fabricated a deepfake video of Ukrainian president Volodymyr Zelenskyy urging his military to surrender. The deep fake rapidly gained traction on social media and the news, causing confusion and heightening tensions amidst a treacherous crisis.[137] The Zelenskyy administration rapidly refuted its authenticity; nevertheless, this example of the weaponization of deepfakes in armed conflicts suggests that this will not be the last time deepfakes threaten international security if measures are not taken to prevent future crises involving deep fakes. Despite the disastrous implications of AI deepfakes, researchers at Northwestern University suggest that, with a strict code of conduct for governments, deep fakes could be used to counter and destabilize terrorist groups or other malicious organizations.



The emergence of AI deep fakes the realization of their harmful effects on society and has led to an influx of research suggesting modes of safeguarding against these threats. The "Disinformation Disruption Framework" developed by the DeepTrust Alliance outlines possible solutions to the misinformation infodemic and other ensuing crises caused by AI and deep fakes. The framework suggests four primary strategies to combat the misinformation crisis: technological development (eg. detection technology), public regulation (eg. legislation), private regulations (eg. terms of service), and public education.[138] Companies like Microsoft and Facebook have implemented AI tools to detect deepfakes with increasing accuracy—some tools achieving detection rates of 80-90%.[139] The Malicious Deep Fake Prohibition Act of 2018, passed by the 115th US Congress, proposed criminal penalties for individuals who create or disseminate deep fakes with the intent to harm others, such as spreading false political content or non-consensual pornography.[140]

[133] Nelson, Taylor, et al. "The Danger of Misinformation in the COVID-19 Crisis." *Missouri Medicine*, vol. 117, no. 6, Nov. 2020, p. 510, pmc.ncbi.nlm.nih.gov/articles/PMC7721433/.
[134] Sample, Ian. "What Are Deepfakes – and How Can You Spot Them?" *The Guardian*, 13 Jan. 2020, www.theguardian.com/technology/2020/jan/13/what-are-deepfakes-and-how-can-you-spot-them.
[135] Mervosh, Sarah. "Distorted Videos of Nancy Pelosi Spread on Facebook and Twitter, Helped by Trump." *The New York Times*, 24 May 2019, www.nytimes.com/2019/05/24/us/politics/pelosi-doctored-video.html?searchResultPosition=7.
[136] Vosoughi, Soroush, et al. *FALSE NEWS IS BIG NEWS*. 2017.
[137] Buffett Brief. *The Rise of Artificial Intelligence and Deepfakes*. July 2023.
[138] Yamaoka-Enkerlin, Anna. *DISRUPTING DISINFORMATION: DEEPFAKES and the LAW*. 8 Oct. 2020.
[139] Burt, Tom. "New Steps to Combat Disinformation." *Microsoft on the Issues*, 1 Sept. 2020, blogs.microsoft.com/on-the-issues/2020/09/01/disinformation-deepfakes-newsguard-video-authenticator/.
[140] Sasse, Ben. *Malicious Deep Fake Prohibition Act of 2018*. 21 Dec. 2018.

AI IN THE ENVIRONMENT AND SUSTAINABILITY

Annabelle Hussain - *UNIS*

Since 1982, global average temperatures have increased by 0.2℃ each decade.[141] With annual global temperature increases as extreme as these, humans' ability to mitigate climate change before it becomes irreversible around 2030 is slim.[142] Fortunately, artificial intelligence (AI) intervention could serve as a remedy.

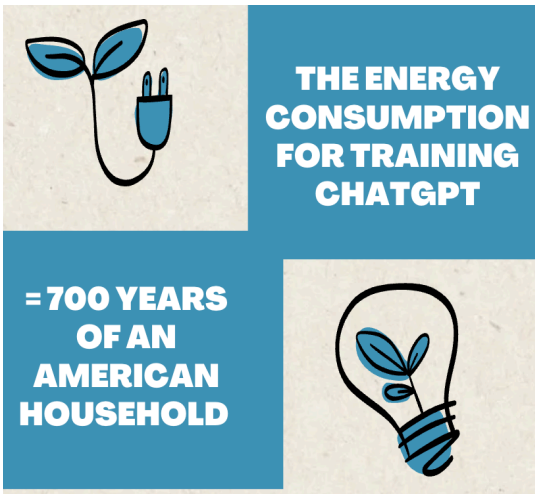
The broader issue of global warming can't be reversed overnight, but methods to combat specific activities, like deforestation, have been implemented. Due to logging, the act of cutting down trees and selling their tinder and pulp, over 15 billion trees are lost globally per annum.[143] According to Reuters, AI has "been trained to analyze the patterns of grain in wood," [144] which can help detect the species and give a ballpark estimate of where the tree came from. This technique is just one example of a tool to detect illegal logging. Additionally, satellite technology can detect and pick up unusual changes in forest cover.[145] After gathering enough data, AI models can predict which areas are most susceptible to illegal logging activity, and preventive measures can be implemented.

In terms of wildlife conservation, institutions are using an approach called "predictive modeling," [146] which is very similar to the techniques used in combating deforestation. After collecting information from poaching monitors, ecosystemic disease trackers, and other tools, AI algorithms are able to use the existing data to determine areas that should be of high conservation priority. Another AI application in use has been automatic species identification. According to the Cutter Consortium, "Motion-triggered cameras enable researchers to capture images of wildlife in their natural habitats. These images are then uploaded […] where AI models automatically identify and classify the species in the photos." [147] This

[141] Lindsey, Rebecca, and Luann Dahlman. "Climate Change: Global Temperature." Edited by Jessica Blunden. Climate.gov, NOAA, 18 Jan. 2024, www.climate.gov/news-features/understanding-climate/climate-change-global-temperature#:~:text=Earth%27s%20temperature%20has%20risen%20by,2%C2%B0%20F%20in%20total. Accessed 20 Dec. 2024.
[142] "Only 11 Years Left to Prevent Irreversible Damage from Climate Change, Speakers Warn during General Assembly High-Level Meeting." United Nations, 28 Mar. 2019, press.un.org/en/2019/ga12131.doc.htm. Accessed 20 Dec. 2024.
[143] Kilgore, Georgette. "How Many Trees Cut Down Each Year or in 2023? The Deforestation Crisis Explained." 8 Billion Trees, 3 Oct. 2024, 8billiontrees.com/trees/how-many-trees-cut-down-each-year/#:~:text=How%20Many%20Trees%20Cut%20Down%20Each%20Year%20or%20in,The%20Deforestation%20Crisis%20Explained&text=If%20you%27ve%20ever%20wondered,are%20lost%20annually%20to%20deforestation.&text=While%20that%20number%20is%20staggering%2C%20it%20can%20be%20hard%20to%20visualiz
[144] Hillsdon, Mark. "From forest-listening to advanced remote sensing, can AI turn the tide on deforestation?" Reuters, 16 Jan. 2024, www.reuters.com/sustainability/land-use-biodiversity/forest-listening-advanced-remote-sensing-can-ai-turn-tide-deforestation-2024-01-16/#:~:text=AI%20has%20also%20been%20trained,recognise%20illegal%20shipments%20of%20timber
[145] "AI in Combating Deforestation." Omdena, www.omdena.com/ai-in-deforestation
[146] Foyet, Metolo A. "AI in conservation: Where we came from — and where we are heading." World Economic Forum, 5 Mar. 2024, www.weforum.org/stories/2024/03/ai-in-conservation-where-we-came-from-and-where-we-are-heading/#:~:text=Predictive%20modeling%20and%20species%20distribution,priority%20and%20planning%20conservation%20interventions. Accessed 20 Dec. 2024.
[147] Hall, Curt. "Transforming Wildlife Conservation & Research with AI." Cutter Consortium, 30 Oct. 2024, www.cutter.com/article/ai-enabled-transformation-wildlife-conservation-research#:~:text=Wildlife%20Insights&text=Motion%2Dtriggered%20cameras%20enable%20researchers,the%20species%20in%20the%20photos.

information can be used to create extinction solutions, as it's estimated that three species go extinct each hour.[148]

AI is also capable of handling situations related to waste management. Multiple software startups, including Greyparrot, based in London, have developed AI systems that use automatic sorting techniques in waste processing facilities. They help recover anything that should or should not be recycled. According to the World Economic Forum, "[Greyparrot] tracked 32 billion waste items across 67 waste categories in 2022, and says it identifies 86 tonnes of material on average that could be recovered but is being sent to landfill.[149] However, in relation to ocean waste, a non-governmental Dutch organization called The Ocean Cleanup is using AI to detect objects in the ocean and create detailed litter maps so that their machines can gather and remove trash. This method is more efficient than trawlers, which remain one of the more popular options for ocean trash removal. The Ocean Cleanup's eventual goal is to tackle the Great Pacific Garbage Patch,[150] which is currently about three times the size of France.



However, on a consumer level, the impacts of AI on the environment are primarily negative. Entering a prompt to an AI chatbot requires nearly 3 watt hours, or Wh, of energy, and generating an image requires 11 Wh. That is equivalent to the amount of energy generally needed to charge a smartphone.[151] ChatGPT's over 10 million daily queries[152] add up to a minimum of 30 megawatt hours, or MWh, a day, assuming each one is prompt. The energy consumption for training ChatGPT, which exposes it to data so it can teach itself tasks, equates to that of an American household for more than 700 hundred years. Due to the energy usage, the servers that power the chatbots begin to heat up, and water must dissipate the heat. In 1,000 Wh, 9 liters of water are used.

When considering the sustainable production and disposal of AI metals and hardware, more problems arise. Mining hardware metals has been directly linked to soil erosion,[153] and electronic waste is often tossed into landfills rather than appropriately recycled. Much of this waste comes from data centers that tech companies need to power their projects and old equipment gets thrown out as it's replaced with newer models.

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[148] "Human Population Growth and Extinction." Center for Biological Diversity, www.biologicaldiversity.org/programs/population_and_sustainability/extinction/#.
[149] Masterson, Victoria. "9 ways AI is helping tackle climate change." World Economic Forum, Jan. 2024, www.weforum.org/stories/2024/02/ai-combat-climate-change/#:~:text=The%20use%20of%20artificial%20intelligence,the%20World%20Economic%20Forum%20says.
[150] "This Is the Largest Cleanup in History | the Ocean Cleanup." YouTube, uploaded by The Ocean Cleanup, 6 Apr. 2022, www.youtube.com/watch?v=Pv1Otdg4fok.
[151] Heikkilä, Melissa. "Making an image with generative AI uses as much energy as charging your phone." MIT Technology Review, 1 Dec. 2023, www.technologyreview.com/2023/12/01/1084189/making-an-image-with-generative-ai-uses-as-much-energy-as-charging-your-phone/. Accessed 20 Dec. 2024.
[152] Lammertyn, Marina. "60+ ChatGPT Facts And Statistics You Need to Know in 2024." InvGate, 23 Sept. 2024, blog.invgate.com/chatgpt-statistics#:~:text=Available%20in%20free%20and%20paid,its%20widespread%20adoption%20and%20impact.
[153] "Can We Mitigate AI's Environmental Impacts?" Yale School of the Environment, 10 Oct. 2024, environment.yale.edu/news/article/can-we-mitigate-ais-environmental-impacts#:~:text=The%20mining%20and%20production%20of,when%20not%20disposed%20of%20correctly.

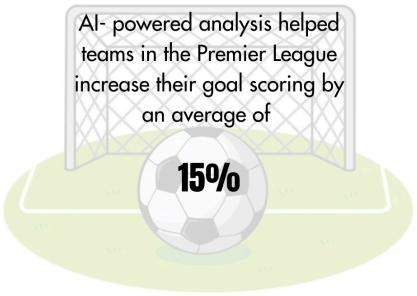
The UN states that more than 190 countries have adopted a series of non-binding ethical recommendations on the environmental use of AI.[154] This agreement recognizes that artificial intelligence is a tool that could change the course of climate change if we collectively learn how to use it responsibly and sustainably.

[154] "AI has an environmental problem. Here's what the world can do about that." UN Environment Programme, 21 Sept. 2024, www.unep.org/news-and-stories/story/ai-has-environmental-problem-heres-what-world-can-do-about#:~:text=More%20than%20190%20countries%20have,the%20environmental%20impact%20of%20AI.

AI IN SPORTS

Micah Kifilu - *UNIS*

Artificial intelligence is revolutionizing the world of sports, enhancing performance, strategy, and fan experiences like never before. AI is reshaping the game on and off the field, from optimizing player training and predicting injuries to delivering real-time analytics and personalized content. But let's take a closer look at how this technology is transforming the future of sports.

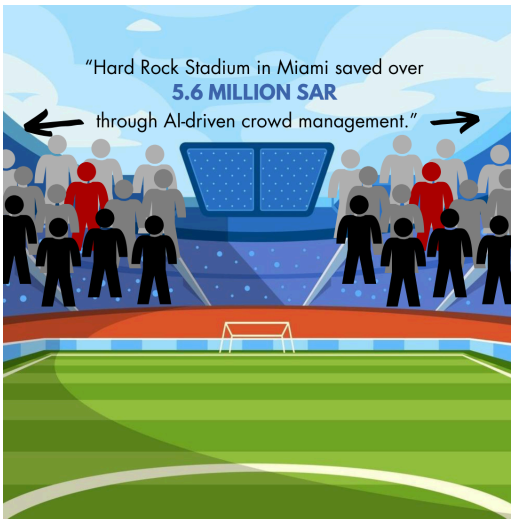


Firstly, AI is being used for performance analysis and player development. One of the ways this is seen is through the NFL's Next Gen Stats,[155] which utilizes AI. Amazon's Next Gen Stats uses machine learning algorithms from AWS to analyze player tracking data from sensors in uniforms and footballs. This technology generates advanced statistics offering more profound insights into player movements and game dynamics in real-time, enhancing our understanding of the game beyond the final score (Amazon). This approach equips coaches and analysts with actionable data to improve strategies and player performance. By analyzing player tendencies and metrics, teams can customize training programs, optimize tactics, and make informed decisions on player use. Insights from Next Gen Stats help identify inefficiencies, adjust play-calling, and monitor workloads to mitigate injury risks. Ultimately, AI boosts team competitiveness and maximizes each player's potential, providing a significant edge in preparation and execution.

Another way AI is being used to transform sports is through referee assistance.[156] According to an article from Scientific American, tennis was among the earliest sports to adopt motion capture technology and computer algorithms to assess whether a ball landed out of bounds during the mid-2000s, and human line judges will be eliminated by 2025 in ATP matches due to advancements in AI technology.[157] Other major leagues, such as the NBA, MLB, and several European soccer leagues, have begun using this technology. In the MLB, there has already been experimentation with using an ABS, or Automated Ball-Strike, since 2019, a system that uses technology to automate ball-strike calls in baseball. In the ABS challenge system, the home-plate umpire calls balls and strikes, but teams can ask the Hawk-Eye system to review a limited number of calls. The NBA has also begun using the Hawk-Eye system to assist referees with coaches' challenges and instant replay. Per Scientific American, this technology has some drawbacks, though, as real-time motion-capture systems often struggle to balance speed and accuracy, according to sports data scientist Meredith Wills. Complex decisions can slow down these AI tools, sometimes taking several seconds, while human officials can make similar calls in under a second, highlighting a key limitation of the technology.

[155] Amazon Web Services**.** "NFL and AWS: Next Gen Stats and Cloud Innovation." *Amazon Web Services*, aws.amazon.com/sports/nfl/.
[156] Dowsett, Ben. "AI Is Helping Referee Games in Major Sports Leagues, but Limitations Remain." *Scientific American*, 2 May 2024, www.scientificamerican.com/article/ai-is-helping-referee-games-in-major-sports-leagues-but-limitations-remain/
[157] Dowsett, Ben. "AI Is Helping Referee Games in Major Sports Leagues, but Limitations Remain." *Scientific American*, 2 May 2024, www.scientificamerican.com/article/ai-is-helping-referee-games-in-major-sports-leagues-but-limitations-remain/.

AI has also started integrating itself into sports broadcasting as multiple major leagues have begun using it to enhance the viewer experience. In the NFL, the league has already started using alternative live streams of their games with unique features powered by AI. For example, in the Week 16 matchup between the Kansas City Chiefs and Houston Texans, an alternative live stream was available on Peacock, and the traditional telecast on NBC, Peacock, and Universo. The telecast encompassed the football game on the field and video game components from EA Sports Madden NFL. Per Forbes, the Madden NFL Cast production team, which included the NFL, EA Sports, and Genius Sports, incorporated features familiar to Madden25 players. The broadcast provided real-time player data and branded content by utilizing next-gen data and GeniusIQ's AI capabilities to enhance viewer engagement.[158]



This innovative broadcasting style showcases how AI technology is being integrated into the NFL, enhancing the viewing experience for fans. It provides a more interactive and engaging way for fans to enjoy the game, making them feel more connected to the action on the field. The NBA has also followed this trend of alternative broadcasts, as Forbes details how Disney offered an alternative animated feed for the New York Knicks-San Antonio Spurs NBA game on Christmas Day. The "Dunk the Halls" alternate broadcast was available on ESPN2, Disney+, and ESPN+[159]. The integration of AI into sports broadcasting is transforming how fans experience games. By incorporating real-time data and interactive elements, leagues like the NFL and NBA enhance engagement and broaden their appeal. These innovations make broadcasts more immersive and dynamic, offering fans new ways to connect with their favorite teams and athletes.

AI is transforming sports by improving performance analysis, assisting referees, and enhancing fan engagement through interactive broadcasting. While it offers benefits like real-time insights, better strategies, and immersive viewing experiences, challenges such as accuracy delays, high costs, and privacy concerns remain significant hurdles. Despite these limitations, AI's ability to optimize both on-field performance and off-field experiences is undeniable, making it an essential tool. As technology advances, AI will continue to shape the future of sports in groundbreaking ways.

[158]Adgate, Brad. "Networks Are Gearing up for Alternative NFL Telecasts—Here's Why." *Forbes*, 4 Dec. 2024,www.forbes.com/sites/bradadgate/2024/12/04/networks-are-gearing-up-for-alternative-nfl-telecasts-heres-why/
[159] Adgate, Brad. "Networks Are Gearing up for Alternative NFL Telecasts—Here's Why." *Forbes*, 4 Dec. 2024,www.forbes.com/sites/bradadgate/2024/12/04/networks-are-gearing-up-for-alternative-nfl-telecasts-heres-why/

COLLABORATIVE AI DEVELOPMENT

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How is Artificial Intelligence advancing the world? AI is a branch of computer science that enables machines to perform tasks necessary for human intelligence. Many states across the world have collaborated to develop AI to improve society. This article will discuss states' collaboration to create AI tools for humanitarian response, healthcare, and agriculture. Additionally, if these states collaborate to benefit artificial intelligence, how do they balance competitiveness?

Using AI, Singapore, and the United States have partnered to respond to humanitarian and natural disasters more effectively. AI has also emerged as a vital tool in preparing for natural disasters. In late June 2019, Singapore and the United States collaborated to evolve AI tools for Humanitarian Aid and Disaster Relief (HADR), as The U.S. Department of Defense (DOD) announced. For AI usage in the HADR, “the two organizations shared ideas and knowledge to push new, innovative AI-enabled applications across government and military operations, the DOD said.”(DOD)[160] Furthermore, Singapore and the U.S also set a mission to advance research and scientific discovery, to prop up environmentally sustainable economic growth.[161] This collaboration between Singapore and the US can encourage future collaboration for AI development.

Technology was essential in deepening the collaboration between the United States and India. India collaborated with the United States to enhance AI technology in healthcare. The two countries partnered in areas such as disease control and surveillance. India and the UK set afloat the UK-India AI Partnership, aimed at tackling global challenges such as healthcare using AI. Moreover, the US–India Artificial Intelligence Initiative (USIAI)[162] - a collaboration intended on AI cooperation in critical areas such as healthcare[163]- was used by the United States and India when cooperating in AI advancements.

[160] "Singapore, U.S. Partner on Artificial Intelligence for Disaster Response." *FORUM*, 25 July 2019, ipdefenseforum.com/2019/07/singapore-u-s-partner-on-artificial-intelligence-for-disaster-response/. Accessed 20 Dec. 2024.
[161] "Fact Sheet: U.S.-Singapore Shared Principles and Collaboration on Artificial Intelligence." *U.S. Department of Commerce*, www.commerce.gov/news/fact-sheets/2024/06/fact-sheet-us-singapore-shared-principles-and-collaboration-artificial. Accessed 5 Jan. 2025.
[162] Kumar, Jitendra. "US–India Collaborative Innovations for Rapid Drug Discovery." *BioProcess International*, 12 June 2024, www.bioprocessintl.com/bioregions/us-india-collaborative-innovations-for-rapid-drug-discovery. Accessed 20 Dec. 2024.
[163]"USA and India Launch AI Initiative USIAI." *INDIAai*, 22 Mar. 2021, indiaai.gov.in/news/usa-and-india-launch-ai-initiative-usiai. Accessed 20 Dec. 2024.

In African nations such as Tanzania and Uganda,[164] Chinese companies have shown AI-based farming tools that help farmers with agricultural development. In June 2024, Sanya, Hainan, China, and the South-South and Triangular Cooperation (SSTC) held a workshop on a China-Africa agricultural and technology partnership. The workshop was arranged by the SSTC of the Food and Agriculture Organization of the United Nations and the Chinese Academy of Agricultural Sciences (CAAS). 130 people attended, including international organizations and government officials from China and African nations. During the workshop, participants identified the priorities to advance agricultural science and technology cooperation between China and Africa through the SSTC. Mr. Anping Ye, Director of the PST Division of FAO, said that China and Africa faced similar issues within sustainable agricultural development, highlighting the importance of strengthening cooperation in technology and agricultural science. AI advancements, in particular, promoted agrarian modernization in China and enhanced agricultural productivity and value chains in Africa.[165]

Countries are developing national AI strategies to continue technological competitiveness in AI while contributing to global advancements. For example, the U.S. and China intend to lead the AI race and have invested significantly in AI research and development domestically. However, international organizations, universities, and other nations have cooperated with both countries on AI research that benefits humanity, such as AI for healthcare and climate change. AI's massive potential has created tension between China and the U.S. As a result, China has challenged the U.S.'s position as the global leader in this field, and several recent policies have been put in place to discourage AI scientists from migrating to or collaborating with other nations between the two countries. Although the number of collaborations between the two countries has increased, US-China partnerships remain rare. Instead of suppressing cross-border migration and collaboration between the two nations, AI development could benefit from promoting such activities; the two countries had always been more impactful when collaborating than when working alone.[166]

In the end, collaboration between states to develop artificial intelligence benefits many organizations worldwide and impacts the world. Collaboration in developing AI can continue to advance technology and improve the world.

[164] "China's Agricultural Assistance Efficiency to Africa: Two Decades of Forum for China-Africa Cooperation Creation." *ScienceDirect*, Sept. 2022, www.sciencedirect.com/science/article/pii/S266615432200062X. Accessed 5 Jan. 2025.
[165]"China-Africa Agricultural Science and Technology Cooperation through South-South and Triangular Cooperation." *FAO*, www.fao.org/partnerships/south-south-cooperation/news/news-article/en/c/1697062/. Accessed 20 Dec. 2024.
[166] "China and the U.S. Produce More Impactful AI Research When Collaborating Together." *Scientific Reports*, 19 Nov. 2024, www.nature.com/articles/s41598-024-79863-5. Accessed 20 Dec. 2024.

AFTERWORD

Artificial Intelligence is no longer a distant concept but a defining force in our present and future. As AI continues to shape industries, economies, and everyday life, it is imperative that we critically engage with its implications, both its potential benefits and its ethical concerns. From its role in automation and decision-making to its influence on privacy, bias, and employment, AI presents challenges that demand thoughtful discussion and responsible innovation.

The UNIS-UN Executive Committee has invited experts to explore the ever-evolving landscape of artificial intelligence, fostering dialogue on its transformative power and the responsibilities that come with it. This conference examines key topics such as AI in education, AI in politics, AI in medicine, AI & misinformation, and collaborative AI development, encouraging attendees to analyze both the pros and cons of this technology.

It is our hope that this working paper has contributed to your understanding of AI's role in the modern world and that, drawing on this knowledge, you feel empowered to question, debate, and contribute to the ongoing conversation about Artificial Intelligence.

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NOTES

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