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Artificial Intelligence: Technology And Its Usage in Media; Comparison with Human Generated Content; Potential and Risks; Impact on Manpower; Cause of A New Divide?

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Abstract

Artificial Intelligence is expanding quickly in the tech sector, with applications seen in the food and supply chain industries, chat-bots, and content and picture development. When critics asserted that AI art systems were pilfering people's intellectual property, AI-generated images grabbed headlines. This research paper examines the complex role that artificial intelligence (AI) plays in the media environment and how it affects the production, consumption, and dissemination of content. It examines the possibilities, dangers, and effects on the labour force in contrast to content produced by humans and artificial intelligence. It also takes into account the formation of potential social divisions. The examination explores the effectiveness, inventiveness, and moral issues related to AI's incorporation into media, analyzing the industry's revolutionary impact and its socioeconomic ramifications. It seeks to provide a thorough grasp of AI's complex interaction with media through this investigation, illuminating the opportunities and difficulties it poses for the future of worker dynamics, societal divisions, and content creation.

Keywords: *Chat GPT, technology, Natural Language Processing (NLP), computer vision (CV), Natural Language Processing (NLP), GPT (Generative Pre-trained Transformer), Media Industry, Impact, Ethical Considerations.*

1. Introduction

The production, delivery, and consumption of media have all been revolutionized by artificial intelligence (AI). This study examines how AI is being used in the media sector by contrasting content created by AI with content created by humans.¹ It looks at the possible advantages and disadvantages of AI in the media, how it will affect employment, and whether it would widen the socioeconomic gap. The goal of the research is to present a thorough grasp of how artificial intelligence will influence media in the future. Artificial Intelligence (AI) has had a profound impact on several industries, the media being one of the most affected. AI-powered tools like computer vision, machine learning, and natural language processing (NLP) have made it possible to automate the production, distribution, and curation of content. With AI's capabilities, the media sector, which has historically relied on human innovation and labour, is undergoing a paradigm shift. GPT and its variants that use generative artificial intelligence (Hereinafter referred to as AI) models have rapidly become a focal point in academic and media discussions about their potential benefits and drawbacks across various sectors of the economy, democracy, society, and environment. It remains unclear whether these technologies result in job displacement or creation, or if they merely shift human labour by generating new, potentially trivial or practically irrelevant, information and decisions.² According to the CEO of Chat GPT, the potential impact of this new family of AI technology could be as big as “the printing press”, with significant implications for employment, stakeholder relationships, business models, and academic research and its full consequences are largely uncovered and uncertain. The increasing workplace use of AI technologies has implications for the experience of meaningful human work. Meaningful work refers to the perception that one’s work has worth, significance, or a higher purpose. The development and organizational deployment of AI is accelerating, but how this will support or diminish opportunities for meaningful work and the ethical implications of these changes remain under-explored.³ The ministerial declaration affirms the countries’ commitment to “*principles for responsible stewardship of trustworthy AI... rooted in democratic values and human rights... and promoting trustworthy, responsible, sustainable and human-centred use of AI*”⁴

The science of creating computers and other devices with the ability to think, learn, and behave in ways that would typically need human intelligence or entail data sets too large for people to process is known as artificial intelligence. AI is a broad field that encompasses many different disciplines, including computer science, data analytics and statistics, hardware and software

¹ “Human resource management in the age of generative artificial intelligence: Perspectives and research directions on Chat GPT (July 2023), <https://onlinelibrary.wiley.com/doi/full/10.1111/1748-8583.12524>

² <https://onlinelibrary.wiley.com/doi/full/10.1111/1748-8583>.

³ The Ethical Implications of Artificial intelligence (AI) For Meaningful Work, Available at: <https://link.springer.com/article/10.1007/s10551-023-05339-7>

⁴ The Hindu, “New Delhi Declaration on artificial intelligence adopted”, col.1-3. P.12 dated Thursday, 14 Dec. 2023.

engineering, linguistics, neuroscience, and even philosophy and psychology.⁵

In many cases, humans will supervise an AI's learning process, reinforcing good decisions and discouraging bad ones, but some AI systems are designed to learn without supervision.⁶ The voices cautioning against the possible risks of artificial intelligence are becoming more and more prominent as AI becomes more advanced and pervasive. "These things could get more intelligent than us and could decide to take over, and we need to worry now about how we prevent that happening," said Geoffrey Hinton, known as the "Godfather of AI" for his foundational work on machine learning and neural network algorithms.⁷

There are several different forms of learning as applied to artificial intelligence.⁸ In general, AI systems work by ingesting large amounts of labelled training data, analyzing that data for correlations and patterns, and using these patterns to make predictions about future states.⁹

Artificial intelligence (AI), in its broadest sense, is intelligence exhibited by machines, particularly computer systems.¹⁰ Applications for AI are growing every day.¹¹

One of the primary challenges surrounding AI is ethical decision-making. As AI systems become increasingly autonomous, questions arise about accountability, bias, and privacy. Ensuring that AI operates fairly and responsibly remains a pressing concern.¹²

Artificial Intelligence technologies have elicited a range of policy responses in India, particularly as the Government of India attempts to position and project the country as a global leader in the production of AI technologies.¹³

In the era of endless digital content, we are constantly bombarded with information from every direction. From social media feeds to news articles, we are consuming content at an unprecedented rate. With the rapid advancement of technology, including AI, our content consumption habits have undergone a massive transformation. AI is not only changing the way

⁵ What is Artificial Intelligence (AI)? Available at: <https://cloud.google.com/learn/what-is-artificial-intelligence> last visited on 19/8/2024. At 2.13pm.

⁶ "Artificial Intelligence, What is Artificial Intelligence (AI)?", available at: <https://builtin.com/artificial-intelligence> ,last visited on 19/8/2024. At 2.51pm.

⁷ Mike Thomas, "AI has been hailed as revolutionary and world-changing, but it's not without drawbacks". available on: <https://builtin.com/artificial-intelligence/risks-of-artificial-intelligence> last visited on 20/8/2024. At 10.43am.

⁸ B.J. Copeland, "artificial intelligence" (Aug 16, 2024), available at: <https://www.britannica.com/technology/artificial-intelligence> last visited on 19/8/2024. At 2.45pm.

⁹ Lev Craig, "What is Artificial Intelligence (AI)?", available at: <https://www.techtarget.com/searchenterpriseai/definition/AI-Artificial-Intelligence>, last visited on 19/8/2024. At 2.38pm.

¹⁰ "Artificial intelligence", https://en.wikipedia.org/wiki/Artificial_intelligence last visited on 19/8/2024. At 2.17pm

¹¹ "What is AI? ", <https://www.ibm.com/topics/artificial-intelligence> intelligence last visited on 19/8/2024. At 2.25pm.

¹² Kuldeep Singh Chauhan and The Intersection "Artificial Intelligence: Challenges and opportunities in the modern workplace and daily life", (JUN 06, 2023), available at: <https://timesofindia.indiatimes.com/readersblog/theintersection/artificial-intelligence-challenges-and-opportunities-in-the-modern-workplace-and-daily-life-54814/> intelligence last visited on 19/8/2024. At 2.35pm

¹³ Divij Joshi, "AI governance in India – law, policy and political economy", (06 Jun 2024), available at: <https://www.tandfonline.com/doi/full/10.1080/22041451.2024.2346428?af=R#abstract> last visited on 22/8/2024. 3.01pm.

content is created but also how we consume it.¹⁴In recent years, artificial intelligence (AI) has grown swiftly, revolutionizing a variety of businesses as well as how individuals interact with one another and the outside world in their daily lives.¹⁵

AI Impact Manpower In The Media Sector

Gen AI is reshaping the landscape of media and entertainment, ushering in a new era of personalized and immersive experiences.¹⁶In the realm of Artificial Intelligence (AI), the Indian manpower industry is experiencing a profound transformation, presenting unprecedented opportunities for growth and innovation.¹⁷Artificial Intelligence is a brainwave to all divisions of the media value chain, it helps a content writer to be innovative, content editors to be artistic and content consumers to find the content according to their interests and present situations.¹⁸ By eliminating much of the legwork involved in locating related information, testing large volumes of content, and re-formatting and repurposing content, AI is fostering human creativity and curiosity.

The future of AI in India's entertainment and media industry is full of potential. As we continue to understand and harness the capabilities of AI, we can expect more personalized and interactive content experiences, transforming the way consumers engage with media.¹⁹ Potential developments include the creation of immersive experiences that were previously only imagined in science fiction, such as virtual and augmented reality. Furthermore, AI has the potential to significantly contribute to tackling language diversity by democratizing access to entertainment by distributing content in multiple regional languages. However, in this new environment, navigating concerns about data privacy, the moral application of AI and equitable access to technology will be essential.

AI-generated content compares to human-generated:

AI-generated content is usually recognized for its “robotic”, fact-based tone of expression.²⁰ While it moves more slowly, each piece has exquisite craftsmanship, nuanced emotional depth, and

¹⁴ AI Contentfy Team. (2023, June 11). The Impact of AI On Content Consumption Habits. Retrieved January 12, 2023, from <https://aicontentfy.com/en/blog/impact-of-ai-on-content-consumption-habits>

¹⁵Muhammad Hashim Khan,“The Impact of AI on the Media Industry”, <https://uu.diva-portal.org/smash/get/diva2:1814616/FULLTEXT01.pdf> last visited on 23/8/2024. 3.08pm.

¹⁶ “Is generative AI beginning deliver on its promise in India? Aldea of India update”, (16 May 2024), available at: https://www.ey.com/en_in/services/ai/generative-ai-india-report/industries-in-transformation/media-entertainment last visited on 24/8/2024. 10.38am.

¹⁷“Artificial Intelligence Revolutionizing India’s Manpower Industry”, available at: <https://www.stmpl.co.in/artificial-intelligence-revolutionizing-indias-manpower-industry/> last visited on 24/8/2024. At 11.11am.

¹⁸ Anjali Raja, “Analyzing the transformative power of AI in media and entertainment”, (Nov 07, 2023), available at: <https://indiaai.gov.in/article/analyzing-the-transformative-power-of-ai-in-media-and-entertainment> last visited on 24/8/2024. At 12.11pm.

¹⁹ Kaushik Chakraborty, “AI in Entertainment and Media: From Recommendation Systems to Interactive Content”, (July14th,2023),available at: <https://www.morismedia.in/blog/ai-in-entertainment-and-media-from-recommendation-systems-to-interactive-content>

²⁰ “Why human-created still beats AI-generated content“(19.04.2024) available on: <https://darwindigital.com/blog/why-human-created-still-beats-AI-generated-content> last visited on 23/8/2024. 2.29pm.

subtle nuances.²¹ Both have valuable roles to play: AI is best suited for data-driven, large-scale tasks, while human content is better at creativity, narrative, and interpersonal interactions. Regarding AI vs human-generated content, both have pros and cons regarding efficiency, quality, cost, and online discoverability. With that, content marketing stands at a crossroads.²²

The AI world has been quickly developing numerous tools for content strategy and production.²³ This study isn't just a face-off between humans and machines; it's a deep dive into how the landscape of content creation is evolving, pushing the boundaries of technology and human ingenuity.²⁴ Other areas where AI falls short include sensitivity, wordplay, puns, and context. AI-generated content can sometimes come across as insensitive simply because the machine does not understand human emotions and experiences.²⁵

AI-generated content excels at producing factual, data-driven material quickly, but it often lacks the emotional depth, complexity, and nuance found in human-created work. On the other hand, human-generated content showcases creativity, cultural awareness, and emotional resonance that AI frequently struggles to replicate.

Potential Benefits and Risks of AI Integration In The Media Industry:

Artificial intelligence has numerous opportunities for all industries, including the media sector. Using the right AI tools can help your brand build social media reach, deepen customer engagement, make informed branding decisions with data, and drive conversions.²⁶ In recent years, social media has become an essential part of our daily lives, enabling us to connect with friends, family, colleagues, and like-minded individuals, exchange ideas and opinions, and stay up-to-date with news and entertainment.²⁷

While businesses across industries are implementing artificial intelligence into their processes, excited for the many benefits it may bring, these businesses must also consider the many

²¹ Sabine Wolf, "AI-Generated Content vs. Human Content: A Comparative Analysis of Quality, Efficiency, and ROI" (August 13, 2024), available at: <https://matrixmarketinggroup.com/ai-generated-content-vs-human-content/#:~:text=It's%20slower%2C%20but%20each%20piece,%2C%20storytelling%2C%20and%20personal%20connection.> Last visited on 23/8/2024. 12.17pm.

²² "AI vs Human-Generated Content: Is Content Marketing Still Worth It?" available at: <https://blackbear.global/blog/ai-vs-human-generated-content-is-content-marketing-still-worth-it> last visited on 23/8/2024. 1.24pm.

²³ Patrick Danial, "AI vs. Human Content: A Case Study" (May 21, 2024), available at: <https://terakeet.com/blog/ai-vs-human-content-a-case-study/> last visited on 23/8/2024. 2.42pm.

²⁴ Michael Brenner, "AI vs. Human Content: What Actually Gets You Results? [Research Report]", (December 4, 2023), available at: <https://marketinginsidergroup.com/artificial-intelligence/ai-vs-human-content-what-actually-gets-you-results-research-report/> last visited on 23/8/2024. 1.36pm.

²⁵ "AI-Generated Content vs Human-Written Content", (March 4, 2024), available at: <https://www.create8.co.uk/ai-generated-content-vs-human-written-content/> last visited on 23/8/2024. 1.47pm.

²⁶ Dakota Murphey, "Benefits and Risks of Using AI for Social Media Marketing", (July 10, 2024), available on: <https://blog.gaggleamp.com/benefits-and-risks-of-using-ai-for-social-media-marketing/#:~:text=Also%20known%20as%20machine%20learning,Privacy%20Problems> last visited on 26/8/2024. 11.14am.

²⁷ Bhavya M., "AI in Social Media: The Benefits and Risks", available on 26/8/2024. 11.45am.

risks it may introduce as well.²⁸ Leaders must take into account the numerous dangers associated with deploying AI, particularly in marketing, which range from potential infringements on intellectual property and copyright to the loss of one's unique brand voice. To mitigate the negative effects of AI in media, responsible practices must be adopted. Media organizations should prioritize human oversight in content creation processes, including fact-checking and verification.²⁹

Additionally, they ought to spend money on AI programs that aim to reduce prejudice and encourage a variety of viewpoints. To find a balance between automation and human judgment, journalists and AI experts must work together. Following are some more potential benefits and risks.

- 1 Artificial intelligence (AI) may automate monotonous jobs, freeing up human labour to concentrate on more intricate and creative areas of media production.
- 2 AI lowers production costs by eliminating the need for huge teams.
- 3 AI-powered personalisation boosts engagement and enhances user experience.
- 4 **Job Displacement:** AI may replace jobs that people have held historically, which would result in job losses.
- 5 **Ethical Concerns:** Content produced by AI may be opaque, which raises questions about responsibility and disinformation.
- 6 **Originality and Innovation:** Relying too much on AI may hinder human ingenuity and originality in the media.
- 7 **Job Displacement:** AI threatens jobs in areas like journalism, content creation, and editing.
- 8 **New Opportunities:** AI also creates new roles, such as AI ethicists, data analysts, and AI specialists.

AI is changing the media landscape and bringing opportunities and difficulties with it. Artificial intelligence (AI)-generated content can improve efficiency and personalisation but can never completely replace human creativity and emotional nuance. There are several serious concerns associated with the use of AI in media, including the loss of jobs and the creation of new socioeconomic gaps. The media industry needs to prioritise ethical considerations, re-skill its workforce, and guarantee equal access to AI technology to realise the full potential of AI.

When thoughtfully applied, AI has many benefits for social media marketing. However, it's

²⁸ "11 Risks To Using AI In Marketing (And How To Mitigate Them)", (Apr 25, 2024), available on: (Apr 25, 2024), <https://www.forbes.com/councils/forbescommunicationscouncil/2024/04/25/11-risks-to-using-ai-in-marketing-and-how-to-mitigate-them/> last visited on 26/8/2024. 12.00am.

²⁹ "The Negative Effect of AI in Media: A Call for Caution", (Dec 21, 2023), available at: <https://medium.com/@akothphanice44/the-negative-effect-of-ai-in-media-a-call-for-caution-c08a73cb0646> last visited on 26/8/2024. 1.06pm.

important to keep in mind there are cons to using AI as well.³⁰In the media and entertainment industry, the infusion of Artificial Intelligence has set the stage for a remarkable change. AI has emerged as a formidable force in the realms of game development, movie production, and advertising, innovating creative processes across industries.³¹

A) National Strategy for Artificial Intelligence:

The use of AI, commonly referred to as AI, is growing at an unprecedented pace. The AI market is projected to grow to USD 312.4B by 2027, according to Report Linker.³² Several countries have formulated national strategies to drive the development, adoption, and regulation of artificial intelligence. These strategies vary in their focus areas and goals but generally aim to harness AI's potential while addressing associated challenges. Here are some examples of different countries:

United States:

Located at the crossroads of economic power and technical advancement, the United States has made a name for itself in the international AI scene. Because of its strong R&D programs and booming IT sector, the country is more well-known for establishing global AI standards and agendas.

Public perception in the US regarding AI is multifaceted, with divergent viewpoints shaping societal discourse. While there's enthusiasm for AI's transformative potential, apprehension persists due to fears of job displacement and loss of autonomy.³³

The U.S. has launched multiple initiatives focusing on AI development and competitiveness. The National AI Initiative Act aims to bolster research and development, emphasizing workforce development, ethics, and data privacy. The New York Times sued Open AI and Microsoft for copyright infringement on Wednesday, opening a new front in the increasingly intense legal battle over the unauthorized use of published work to train AI technologies (7).

China: China unveiled its "*New Generation Artificial Intelligence Development Plan*" to become a world leader in AI by 2030. The plan emphasizes AI research, talent cultivation, industrial application, and ethical considerations. "For China in particular, exploiting the existing technology or trade secrets of others has become a popular shortcut encouraged by the government" said Yen

³⁰ Dakota Murphey, "Benefits and Risks of Using AI for Social Media Marketing" (July 10, 2024), available on [https://blog.gaggleamp.com/benefits-and-risks-of-using-ai-for-social-media-marketing#:~:text=While%20AI%20tools%20can%20help,audience%20engagement%2C%20and%20customer%20service](https://blog.gaggleamp.com/benefits-and-risks-of-using-ai-for-social-media-marketing#:~:text=While%20AI%20tools%20can%20help,audience%20engagement%2C%20and%20customer%20service.). Last visited on 23/8/2024. 2.54pm.

³¹ Leeway Hertz, "AI in media and entertainment: Use cases, benefits and solution", available on: <https://www.leewayhertz.com/ai-in-media-and-entertainment/> Last visited on 23/8/2024. 2.59pm.

³² Danielle Chazen, "AI in Media Industry: Artificial Intelligence and Latest Technology", Available at: <https://verbit.ai/ai-in-media-industry-latest-technology>

³³ S Shailesh, "Unraveling the US AI Strategy: A Comprehensive Analysis", (07/01/2024), available at: [https://www.cescube.com/vp-unravelling-the-us-ai-strategy-a-comprehensive-analysis#:~:text=Positioned%20at%20the%20nexus%20of,AI%20agendas%20and%20standards%20worldwide](https://www.cescube.com/vp-unravelling-the-us-ai-strategy-a-comprehensive-analysis#:~:text=Positioned%20at%20the%20nexus%20of,AI%20agendas%20and%20standards%20worldwide.).

Sun, director of the China program at the Stimson Center, a Washington-based research institute.³⁴

European Union: The EU's approach to artificial intelligence centres on excellence and trust, aiming to boost research and industrial capacity while ensuring safety and fundamental rights.³⁵

The use of artificial intelligence in the EU will be regulated by the AI Act, the world's first comprehensive AI law.³⁶ The European Union (EU) is working on a new legal framework that aims to significantly bolster regulations on the development and use of artificial intelligence.³⁷ The EU released its "*Coordinated Plan on AI*" focusing on boosting AI development while ensuring ethical and trustworthy AI.³⁸ Initiatives include investment in research, fostering skills, and addressing societal challenges.

Canada: Canada is a world-leading artificial intelligence (AI) research hub with high-growth career opportunities. More than 35,000 new innovative jobs are expected to be created over the next 5 years. Working in AI in Canada means collaborating with academics, the private sector and government.³⁹ Canada has become the springboard to advance AI-fuelled enterprises around the globe.⁴⁰ Canada's "*Pan-Canadian Artificial Intelligence Strategy*" aims to position Canada as a leader in AI research. The strategy involves significant investment in research and talent development through collaborations between academia, industry, and government. The economic and social benefits of a powerful AI industry are immense. AI technologies are creating a critical impact on several digital economy fields. The cumulative economic impact of AI in 2025 is predicted to be between \$7.1 to \$13.1 trillion; the trend is currently evident and the impact of AI on GDP and employment in Canada remains to be explored. Considering this impact, Canada needs to have strategies in place to keep up with the speed of AI-related economic transformations. Strategies can include targeted funding and research, easing immigration of qualified students, removing bureaucratic hurdles for tax credits, creating an entrepreneurial environment, inspiring start-ups and protecting Canadian IP.⁴¹

United Kingdom: The UK has announced its AI Sector Deal, focusing on fostering AI innovation, attracting talent, and ensuring ethical AI deployment. Initiatives include funding for AI research

³⁴ Indian Express, "Chinese spy agency rising to challenge the CIA, with AI help", 28th Dec. 2023. Col.2-7.

³⁵ "A European approach to artificial intelligence", Available at: <https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence>

³⁶ "EU AI Act: first regulation on artificial intelligence", (08-06-2023), Available at: <https://www.europarl.europa.eu/topics/en/article/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence>

³⁷ "Artificial Intelligence- The European Union's Artificial Intelligence Act, explained", (Jun 30, 2023), Available at: <https://www.weforum.org/agenda/2023/06/european-union-ai-act-explained/>

³⁸ <https://digital-strategy.ec.europa.eu/en/policies/plan-ai>

³⁹ "Study artificial intelligence in Canada", (2023-12-28), Available at: <https://www.educanada.ca/start-commencez/ai-ia.aspx?lang=eng>

⁴⁰ Impact and opportunities: Canada's AI ecosystem - 2023 Report "produced by Deloitte on behalf of CIFAR, Amii, Mila and the Vector Institute (9/27/23,), Available at: <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/press-releases/ca-national-ai-report-2023-aoda-en.pdf>

⁴¹ "Artificial Intelligence In Canada Where Do We Stand? Information And Communications Technology Council April, 2015", (4/28/15)

and development hubs. The UK's AI market is currently valued at over \$21 billion, and it is estimated to grow significantly during the next few years and add \$1 trillion to the UK economy by 2035. UK artificial intelligence investment has reached record highs with UK AI scale-ups rising almost double that of France, Germany, and the rest of Europe combined. The UK is the third largest AI market in the world after the United States and China. Make sure the UK properly governs AI technology to promote investment, innovation, and the preservation of the general public and our core values.⁴²

United Arab Emirates: The UAE launched the "*UAE Strategy for Artificial Intelligence*," aiming to integrate AI into various sectors like healthcare, education, transportation, and government services. It emphasizes AI adoption and skill development.

Singapore: Singapore unveiled its "*AI Strategy*" to drive AI adoption and innovation across sectors. Initiatives include funding for AI research, developing AI talent, and promoting the ethical use of AI.

These strategies typically involve a combination of funding for research and development, promoting AI education and talent acquisition, establishing ethical guidelines and regulations, fostering collaborations between public and private sectors, and focusing on the societal and economic impacts of AI. The overarching goal is to ensure that countries can harness the benefits of AI while addressing potential risks and challenges. Artificial Intelligence is poised to disrupt our world. With intelligent machines enabling high-level cognitive processes like thinking, perceiving, learning, problem-solving and decision-making, coupled with advances in data collection and aggregation, analytics and computer processing power, AI presents opportunities to complement and supplement human intelligence and enrich the way people live and work.⁴³

B) Global Developments in Artificial Intelligence:

The field of AI has seen remarkable advancements across various domains globally. Here are some key global developments:

- i) AI in Healthcare:** AI is transforming healthcare with applications in diagnostics, drug discovery, personalized medicine, and patient care. AI-powered tools analyze medical images, predict disease outbreaks, and assist in treatment decisions.⁴⁴
- ii) Autonomous Vehicles:** Numerous countries are investing heavily in self-driving car technology. Testing and development of autonomous vehicles have progressed, aiming to enhance transportation safety and efficiency.

⁴² "United Kingdom Artificial Intelligence Market", (09/16/2022), Available at: <https://www.trade.gov/market-intelligence/united-kingdom-artificial-intelligence-market-0>

⁴³ Arnab Kumar, (13/3/2020), "National Strategy for the Artificial Intelligence", Available at: <https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf>

⁴⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7325854/>

- iii) **AI Ethics and Regulation:** With its unique mandate, UNESCO has led the international effort to ensure that science and technology develop with strong ethical guardrails for decades.⁴⁵ Governments and organizations worldwide are working on establishing ethical guidelines and regulations for AI. Efforts focus on ensuring fairness, transparency, and accountability in AI systems.
- iv) **Natural Language Processing (NLP):** NLP applications have seen significant progress. Language models like GPT (Generative Pre-trained Transformer) have revolutionized text generation, translation, sentiment analysis, and more.
- v) **AI in Finance:** Financial institutions leverage AI for fraud detection, risk assessment, algorithmic trading, and customer service. AI algorithms analyze vast amounts of financial data for better decision-making.
- vi) **AI for Sustainability:** AI technologies play a crucial role in addressing climate change and sustainability challenges. Applications include optimizing energy consumption, managing resources efficiently, and monitoring environmental changes.
- vii) **AI and Robotics:** Advancements in robotics driven by AI have expanded their applications in industries like manufacturing, logistics, healthcare, and even personal assistance.
- viii) **AI in Education:** AI is reshaping education through personalized learning, adaptive tutoring systems, and improving administrative tasks. It tailors educational content to individual student needs.
- ix) **Geopolitical Competition:** AI has become a focal point in geopolitical competitions, with countries investing heavily in AI research and development to maintain competitiveness and national security.
- x) **AI and Workforce Transformation:** The integration of AI technologies into the workforce has led to discussions about the future of work, re-skilling, and the potential impact of automation on jobs. These global developments underscore the widespread adoption and impact of AI across diverse sectors, while also raising concerns about ethics, privacy, and the responsible use of AI technologies. Collaboration between various stakeholders remains crucial to harnessing the full potential of AI while addressing its challenges. The risks created by artificial intelligence can seem overwhelming. What happens to people who lose their jobs to an intelligent machine? Could AI affect the results of an election? What if a future AI decides it doesn't need humans anymore and wants to get rid of us? These are all fair questions, and the concerns they raise need to be taken seriously. But there's a good reason to think that we can deal with them: This is not the

⁴⁵ <https://www.unesco.org/en/artificial-intelligence/recommendation-ethics>

first time a major innovation has introduced new threats that had to be controlled. We've done it before.⁴⁶

C) Advantages of using AI for content creation:

Transformative artificially intelligent tools, such as Chat GPT, designed to generate sophisticated text indistinguishable from that produced by a human, are applicable across a wide range of contexts. The technology presents opportunities as well as, often ethical and legal, challenges, and has the potential for both positive and negative impacts for organizations, society, and individuals.⁴⁷

The rise of AI-generated content is having a profound impact on freelance writers and journalists, as more and more companies seek to take advantage of the benefits offered by machines. The effects can be seen in several ways, and they are causing significant concern among those working in the content creation industry.⁴⁸

AI will be the biggest technological shift in our lifetime. It will create immense opportunities, and transform every walk of life and we're excited to see the Indian government's vision to use this technology to benefit its people through its efforts to bridge linguistic divides, transform agriculture, enhance citizen and health services, and empower individuals through skill development and more.⁴⁹

In recent years, news media has been greatly disrupted by the potential of technologically driven approaches in the creation, production, and distribution of news products and services. AI has emerged from the realm of science fiction and has become a very real tool that can aid society in addressing many issues, including the challenges faced by the news industry. The ubiquity of computing has become apparent and has demonstrated the different approaches that can be achieved using AI.⁵⁰ Based on the seven subfields of AI, which are machine learning, computer vision (CV), speech recognition, Natural Language Processing (NLP), planning, scheduling, optimization, expert systems, and robotics, we examined how the news industry has adopted AI. According to our research, three subfields—machine learning, computer vision, and planning, scheduling, and optimization—are being explored more in the news media. The journalistic field

⁴⁶ Bill Gates, "The Risk of Artificial Intelligence are real but Manageable", (11 July 2023), Available at: <https://www.gatesnotes.com/The-risks-of-AI-are-real-but-manageable>

⁴⁷ Volume 71, August 2023, "So what if Chat GPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy", International Journal of Information Management, Available at: <https://www.sciencedirect.com/science/article/pii/S0268401223000233>

⁴⁸ AIContentfy team, "The impact of AI-generated content on employment", (November 6, 2023), Available at: <https://aicontentfy.com/en/blog/impact-of-ai-generated-content-on-employment>.

⁴⁹ Michaela Browning, "VP, Government Affairs & Public Policy, Google Asia Pacific", (29th Nov. 2023), Available at: <https://blog.google/intl/en-in/company-news/technology/our-approach-to-protecting-users-from-the-risks-of-ai-generated-media/>

⁵⁰ Maithais Falipe De Lima Santos, "Artificial Intelligence in News Media: Current Perceptions and Future Outlook", (30 Sept, 2021) Available at: <https://www.mdpi.com/2673-5172/3/1/2>

still lacks full deployment in other areas. The majority of AI news ventures are supported financially by big giants like Google. This restricts the potential of AI to a select group of news industry participants.

D) Limitations of AI technologies:

With all the hype around Artificial Intelligence - robots, self-driving cars, etc. - it can be easy to assume that AI doesn't impact our everyday lives. In reality, most of us encounter Artificial Intelligence in some way or the other almost every single day. From the moment you wake up to check your smartphone to watching another Netflix-recommended movie, AI has quickly made its way into our everyday lives. According to a study by Statistics, the global AI market is set to grow up to 54 per cent every single year. But what exactly is AI? Will it serve good to mankind in the future? Well, there are tons of advantages and disadvantages of Artificial Intelligence which we'll discuss in this article. But before we jump into the pros and cons of AI, let us take a glance over what is AI. ⁵¹

Businesses are increasingly looking for ways to put AI technologies to work to improve their productivity, profitability and business results. However, while there are many business benefits of artificial intelligence, there are also certain barriers and disadvantages to keep in mind. ⁵²

AI has made incredible strides, but it still grapples with a range of limitations:

1. Data Dependence: AI heavily relies on data for learning. It can struggle when faced with insufficient or biased data, leading to skewed outcomes or limited generalization. At the heart of AI, especially machine learning, is its voracious appetite for data. The better the data, the more refined the AI's performance. ⁵³

2. The Difficult Task of Data Collection: AI requires vast datasets, but it also needs data that is relevant, diverse, and of high quality. Given problems like data silos, privacy concerns, and biases in the data, obtaining clear, objective data is a huge challenge.

3. Lack of Common Sense and Contextual Understanding: AI often lacks human-like common sense reasoning and struggles to understand context, leading to misinterpretations or incorrect conclusions. When AI models are trained on real-world data, societal prejudices might be absorbed and reinforced, which could result in unjust or discriminating outcomes. There are legitimate worries about job losses across sectors as a result of automation and AI, which calls for a reevaluation of skill sets and retraining initiatives. Concerns concerning privacy and the possible

⁵¹ Nikita Duggal, "Advantages and Disadvantages of Artificial Intelligence [AI]", (Nov 24, 2023), <https://www.simplilearn.com/advantages-and-disadvantages-of-artificial-intelligence-article>

⁵² "Artificial intelligence in business Risks and limitations of artificial intelligence in business", Available at: <https://www.nibusinessinfo.co.uk/content/risks-and-limitations-artificial-intelligence-business> article

⁵³ Varghese C. , " Challenges and limitations of AI", (Sept.8, 2023), Available at: <https://www.linkedin.com/pulse/challenges-limitations-ai-varghese-chacko>

abuse of technology for totalitarian control are raised by the explosion of AI-powered surveillance tools.

4. Ethical and Bias Issues: Machines can't have bias, right? After all, it doesn't have experiences or memories from which to form said bias. Unfortunately, that's not quite the case: machines can only learn from the data they have and if this data is biased, incomplete, or of poor quality, the output of the machine will reflect the same problems.⁵⁴

An AI system that is biased or unfair can have severe consequences for individuals and society as a whole.⁵⁵ AI can perpetuate biases in the data it learns from, resulting in biased decision-making. Ensuring fairness and mitigating bias remains a significant challenge.

5. Explainability and Interpretability: Some AI models are complex and not easily explainable, making it hard to understand how they arrive at specific conclusions. This lack of transparency can hinder trust and adoption.

6. Limited Creativity and Innovation: While AI can generate novel solutions based on existing data, it lacks creativity and innovation compared to human thinking. In the current stage of Artificial intelligence, one can only employ it for individual solutions to carry out certain AI-powered marketing tasks. There are numerous intelligent marketing solutions available, ranging from using AI to optimize and personalise your content to an AI tool that helps optimize paid advertising. However, as there is no universally applicable answer, using a variety of different tools to complete a variety of artificially intelligent activities can be costly, time-consuming, and messy.⁵⁶

Regarding safety, ethics, or privacy, there is no consensus. AI use cases and their limitations still require further thought and clarification. AI safety is critical given the current constraints, and prompt action is required. The majority of AI detractors also voice ethical concerns regarding its use, both from a philosophical and how it undermines privacy notions standpoint. We believe that intellect in humans is special and innate. Giving up that exclusivity could appear illogical. One of the frequently debated topics is whether or not robots should have human rights if they can perform all duties that people can, so rendering them equal to humans. If so, how would you characterize the rights of these robots? As of right now, we don't have conclusive answers for such circumstances.

AI is one of the computing industry's most rapidly evolving and growing technologies today. A machine that uses this technology can think like a human. AI simulates human intellect in a computer program so that it can think and behave like a person.⁵⁷

⁵⁴ <https://www.ironhack.com/us/blog/ethics-and-bias-in-artificial-intelligence>

⁵⁵ <https://www.linkedin.com/pulse/ethics-ai-navigating-challenges-bias-fairness-nishant-khare#:~:text=An%20AI%20system%20that%20is,these%20groups%20to%20access%20credit>

⁵⁶ "What are the Limitations of Artificial Intelligence" (26 August, 2022), Available at: <https://www.careerera.com/blog/what-are-the-limitations-of-artificial-intelligence>

⁵⁷ "Biggest Limitations of Artificial Intelligence", (July 1 2022), Available at: <https://glair.ai/post/5-biggest-limitations->

7. Resource Intensiveness: Training sophisticated AI models requires significant computational power and energy consumption, making it expensive and less environmentally friendly.⁵⁸

8. Security Risks: Artificial intelligence (AI) has been enhancing cyber security tools for years. For example, machine learning tools have made network security, anti-malware, and fraud-detection software more potent by finding anomalies much faster than human beings. However, AI has also posed a risk to cyber security. Brute force, denial of service (DoS), and social engineering attacks are just some examples of threats utilizing AI.⁵⁹ AI systems can be vulnerable to attacks and manipulation, leading to potential security threats if not properly secured.⁶⁰

9. Human-Machine Collaboration Challenges: Integrating AI into human workflows seamlessly is challenging. Understanding when to trust AI recommendations and collaborating effectively remains an ongoing hurdle. As technology advances, efforts are made to address these limitations through research, regulation, and ethical considerations.

As with most technological revolutions that affect the workplace, chatbots can potentially create winners and losers and will affect both blue-collar and white-collar workers. To maximize economic gains and minimize the potential negative impact on workers, policymakers need to act in the interests of all of society. Those in developing countries need to step up the pace in preparation for such technologies or risk falling further behind.⁶¹

Similar to any new technology, there could be significant upfront costs along with continuous maintenance and repair needs. Your AI software must receive regular upgrades to keep up with the changing business environment. Before putting any AI technology into use, your company needs to thoroughly consider the ROI.

Though there are several obstacles, AI holds the potential to revolutionize. We must make use of AI's potential while carefully negotiating its difficulties as we advance. While acknowledging its advancements, we also need to fund studies and discussions that tackle its drawbacks to guarantee a time when AI is both potent and helpful. Recall that in the realm of business, information is the catalyst for change rather than merely a source of power. Go deep, comprehend, and take action.

In conclusion, managing one's online reputation might be impacted by AI-generated content in both beneficial and bad ways. One way that AI-generated content might benefit a business is by

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⁵⁸ <https://www.technologyreview.com/2019/06/06/239031/training-a-single-ai-model-can-emit-as-much-carbon-as-five-cars-in-their-lifetimes/>

⁵⁹ "AI in Cyber Security: Risks of AI." Available at: <https://www.malwarebytes.com/cybersecurity/basics/risks-of-ai-in-cyber-security>

⁶⁰ <https://www.malwarebytes.com/cybersecurity/basics/risks-of-ai-in-cyber-security#:~:text=Adversarial%20Attacks%20and%20Manipulation%3A%20AI,subtle%20changes%20to%20input%20data.>

⁶¹ Shamika N. Sirimanne, "how artificial intelligence chat bots could affect jobs", (18 January 2023), Available at: <https://unctad.org/news/blog-how-artificial-intelligence-chatbots-could-affect-jobs>

producing interesting, high-quality material that enhances its online presence. However, AI-generated content can also be used to produce spammy, misleading, or erroneous information, which can harm an organization's online reputation. Businesses that employ content created by AI should be aware of the hazards and take precautions to reduce them. This entails utilizing high-quality data, keeping an eye on the results of AI models, maintaining transparency, and involving humans in the process.

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