Light and Shadows of Generative AI for Individuals, Organizations and Society

Shankar Subramanian Iyer*

Westford University College, UAE

***Corresponding author:** Shankar Subramanian Iyer, Faculty, Westford University College, Sharjah, UAE*

ABSTRACT

Purpose: The purpose of this paper is to explore the light and shadows of generative AI and its implications for individuals, organizations, and society. Generative AI, encompassing technologies such as Generative Adversarial Networks (GANs) and Variational Autoencoders (VAEs), holds significant promise for creativity, innovation, and efficiency, yet it also raises concerns regarding ethics, privacy, and societal impact. Ultimately, exploring this topic enables stakeholders to harness the transformative potential of generative AI while mitigating its potential risks, thereby fostering a more equitable and sustainable future.

Methodology: This research employs a comprehensive literature review to examine the current state of generative AI technology, its applications across various domains, and the associated ethical, social, and economic implications. Case studies and examples are utilized to illustrate the positive and negative aspects of generative AI, highlighting its potential benefits and risks for individuals, organizations, and society.

Implications of the Research: The findings of this research shed light on the dual nature of generative AI, revealing its potential to enhance creativity, productivity, and personalized experiences, while also posing challenges related to ethics, privacy, and inequality. The implications of generative AI extend beyond technological advancements to encompass broader societal issues, including economic disruption, cultural transformation, and governance dilemmas. Moreover, it sheds light on the ethical, social, and economic implications of generative AI, helping policymakers, practitioners, and researchers navigate the complexities of AI governance and responsible innovation.

Design: The design of this paper incorporates a structured analysis of generative AI technology, its applications, and its impact on individuals, organizations, and society. By examining both the positive and negative aspects of generative AI, this research offers a balanced perspective on its potential benefits and risks, informing policymakers, practitioners, and researchers about the complexities of AI governance and responsible innovation. By examining both its positive and negative aspects, this topic provides a comprehensive understanding of how generative AI can enhance creativity, innovation, and efficiency for individuals and organizations.

Future of the Study: Future research in this area may explore strategies for mitigating the negative impacts of generative AI while maximizing its potential benefits. This includes developing ethical guidelines, regulatory frameworks, and governance mechanisms to ensure responsible development and deployment of generative AI technologies. Additionally, further investigation into the long-term societal implications of generative AI, such as its impact on employment, education, and democracy, is warranted.

Keywords: Generative AI; Generative Adversarial Networks (Gans); Variational Autoencoders (Vaes); Ethics, Privacy; Societal Impact; Creativity; Innovation, Governance; Responsible Innovation

Introduction

Generative Artificial Intelligence (Gen AI) signifies a significant leap in technological progress, offering immense opportunities across sectors. However, it also brings forth complex ethical dilemmas and potential risks that demand careful consideration. Understanding both its advantages and pitfalls is essential for navigating the implications of Gen AI effectively. Gen AI fosters unprecedented creativity and innovation, enabling the exploration of new ideas and solutions. Through automation and optimization, Gen AI enhances efficiency, reducing costs and freeing up human resources for strategic tasks. Gen AI facilitates hyper-personalized experiences, boosting customer satisfaction and fostering stronger relationships. By analyzing vast data, Gen AI provides valuable insights, empowering informed decision-making (). Gen AI revolutionizes healthcare, improving diagnosis, treatment, and personalized medicine. Gen AI algorithms may perpetuate biases, leading to discriminatory outcomes, particularly in critical areas like hiring and justice.

Automation by Gen AI risks displacing jobs, exacerbating economic inequality. Gen AI's reliance on data raises concerns about privacy breaches and cybersecurity threats. Accountability issues arise with the development of autonomous systems, posing legal and ethical challenges. Gen AI introduces ethical dilemmas, including concerns about manipulation and autonomy infringement. Businesses across sectors integrate AI to enhance operations, from personalized retail experiences to improved healthcare services. Adopting Gen AI requires addressing ethical concerns, ensuring fairness, transparency, and accountability [1]. A balanced approach involves investing in research, fostering collaboration, promoting digital literacy, and prioritizing ethical considerations. Future advancements include enhanced personalization, autonomous decision-making, collaborative intelligence, ethical governance, innovation, sustainability, and continuous learning. Ethical considerations encompass various aspects of society, individual autonomy, fairness, and accountability, necessitating responsible deployment. In summary, understanding and addressing the ethical implications of Gen AI are crucial for leveraging its benefits while mitigating potential risks. Generative AI enables the creation of new data, images, and content that closely resemble samples from the training data. While it offers opportunities for creativity, innovation, and efficiency, concerns about ethics, privacy, and societal impact have also been raised [2].

Research Questions

1. What are the potential benefits of generative AI for individuals, organizations, and society?

2. What are the risks and challenges associated with the widespread adoption of generative AI?

3. How can stakeholders mitigate the negative impacts of generative AI while maximizing its benefits?

Research Objectives

1. To examine the positive and negative aspects of generative AI technology.

2. To identify ethical, social, and economic implications of generative AI for individuals, organizations, and society.

3. To propose strategies for responsible development, deployment, and governance of generative AI technologies.

Literature Review

Ethical Gen AI systems should prioritize transparency and explainability, enabling users to understand their operations and decisions. This fosters trust and accountability, particularly in critical areas like hiring and healthcare. Gen AI systems must address biases to ensure fairness, mitigating biases in training data and algorithms to promote equitable outcomes across demographic groups. Protecting individuals' privacy and data rights is essential in Gen AI applications. Robust data protection measures and informed consent processes are necessary to safeguard against misuse and breaches. Establishing clear accountability is crucial in Gen AI deployment, especially in autonomous systems. Ethical governance frameworks should define roles and mechanisms for oversight and redress [3].

Gen AI systems must undergo rigorous testing and validation to ensure safety and reliability, minimizing risks such as system failures and unintended behaviors. Designing Gen AI systems with human well-being in mind is paramount, prioritizing human autonomy and dignity while promoting inclusivity and collaboration. Evaluating the broader societal impact of Gen AI deployment is essential for promoting social justice and equity. Impact assessments should consider diverse stakeholders and communities. Ethical Gen AI development requires ongoing monitoring and improvement to address emerging ethical challenges and societal concerns, necessitating interdisciplinary collaboration and knowledge sharing. Governments need comprehensive regulations addressing data privacy, algorithmic transparency, and accountability in GenAI deployment. Striking a balance between innovation and societal interests is challenging. Governments should encourage adoption of ethical guidelines like transparency and fairness [4]. However, ensuring compliance across diverse stakeholders presents challenges. Funding AI research on ethics and societal impact is crucial. Challenges include resource allocation and translating research into practical solutions. Data governance frameworks must balance data access with privacy concerns. Addressing biases and disparities while ensuring security is challenging. Governments need to invest in AI expertise within regulatory bodies. Challenges include talent retention and keeping pace with technological advancements. Collaborating internationally to set common standards and best practices is essential. However, navigating geopolitical tensions and differing regulatory approaches poses challenges.

Governing GenAI demands a multifaceted approach, including regulatory frameworks, ethical principles, research, data governance, capacity building, and international collaboration. Despite challenges, proactive efforts are necessary to ensure GenAI benefits society while upholding fundamental rights and values [5]. The Gap Analysis revealed that existing research has explored the technical capabilities of generative AI, there is a need for a comprehensive analysis of its societal implications and ethical considerations. This paper aims to bridge this gap by providing a holistic perspective on the light and shadows of generative AI. The conceptual model formulated draws upon theories of technology adoption, ethical decision-making, and societal impact assessment to inform the analysis of generative AI's implications for individuals, organizations, and society. The implementation of AI in innovation and creativity projects can have profound impacts on various aspects of the processes.

AI can significantly enhance creativity by providing new insights, generating novel ideas, and aiding in the creative process [6]. AI algorithms can analyze vast amounts of data to identify patterns, trends, and correlations that humans might overlook. These insights can inspire new creative directions and solutions. Generative AI models, such as deep learning-based neural networks, can generate new content, including images, music, and text. These models can serve as sources of inspiration for artists, writers, and designers. AI-powered collaborative tools can facilitate brainstorming sessions and creative collaboration among team members. These tools can provide real-time feedback, suggestions, and visualizations to support the creative process. AI can enhance productivity by automating repetitive tasks, streamlining workflows, and optimizing resource allocation. AI-driven automation can handle routine tasks, such as data entry, content generation, and quality assurance, freeing up human resources for more creative and strategic activities [4].

AI algorithms can analyze historical data to make predictions and recommendations, enabling businesses to anticipate demand, optimize inventory, and allocate resources more efficiently [7]. AI-powered virtual assistants and chatbots can provide personalized support and assistance to individuals and teams, helping them stay organized, prioritize tasks, and manage their workload more effectively. The widespread adoption of AI raises significant privacy concerns related to data collection, storage, and usage. AI systems rely on large volumes of data, including sensitive personal information. Ensuring the security of this data is crucial to prevent unauthorized access, data breaches, and identity theft. Minimizing the collection and retention of unnecessary data can reduce privacy risks. AI algorithms should only access and use data that is essential for their intended purpose, with proper consent from individuals. Implementing techniques such as data anonymization and encryption can protect the privacy of individuals' data, making it more difficult for unauthorized parties to access or identify sensitive information [8].

AI systems can inadvertently perpetuate biases and discrimination present in the data they are trained on, leading to unfair outcomes and disparities. Biases present in training data can result in AI algorithms making decisions that reflect or amplify existing societal biases. For example, biased hiring data can lead to discriminatory hiring decisions made by AI-powered recruitment systems. Ensuring algorithmic fairness involves identifying and mitigating biases in AI algorithms to promote equitable outcomes across different demographic groups. This may require techniques such as bias detection, data preprocessing, and algorithmic adjustments. Transparent AI systems that provide explanations for their decisions can help detect and address biases and discrimination [9]. Establishing mechanisms for accountability and oversight can hold AI developers and users responsible for mitigating bias-related risks. In summary, the successful implementation of AI in innovation and creativity projects depends on effectively addressing issues related to creativity enhancement, productivity improvement, privacy concerns, and bias and discrimination. By prioritizing ethical considerations, transparency, and fairness, organizations can harness the transformative potential of AI while mitigating potential risks and ensuring responsible deployment (Radanliev et al., 2024).

Hypotheses

- H1 - There exists a significant relationship between Creativity enhancement factors and the Successful Implementation of AI in Innovation and Creativity Project

- H2 - There exists a significant relationship between Productivity Improvement and the Successful Implementation of AI in Innovation and Creativity Project

- H3 - There exists a significant relationship between Privacy Concerns and the Successful Implementation of AI in Innovation and Creativity Project

- H4 – The Successful Implementation of AI in Innovation and Creativity Project is significantly influenced by the Bias and Discrimination factors.
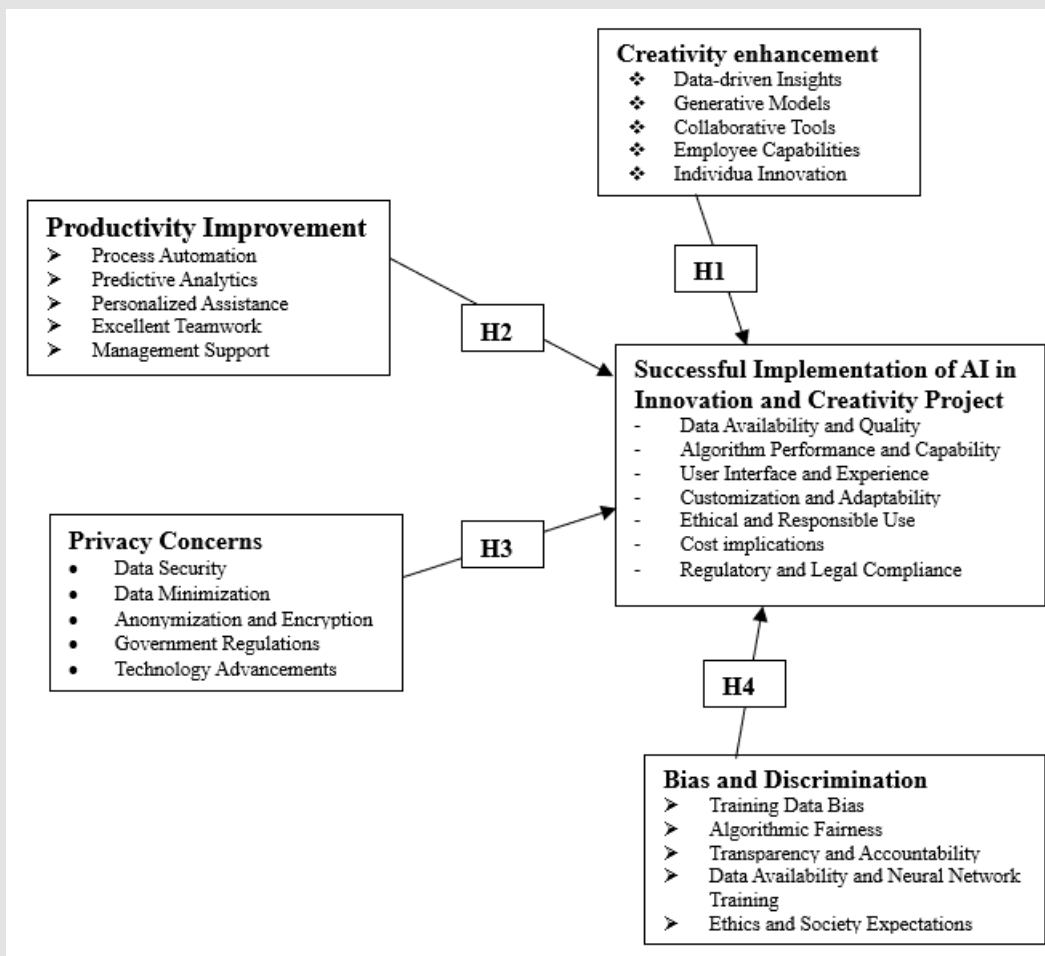
Figure 1: The Conceptual Model depends upon theories of technology adoption, ethical decision-making, and societal impact assessment.

Methodology

The researchers adopted a mixed methodological approach to test the conceptual model and achieve consensus. This involved employing a variety of statistical tools, encompassing both descriptive and inferential statistics, to analyze the data gathered from surveys or questionnaires. Such an approach facilitated a thorough grasp of the responses and exploration of relationships between different variables. The utilization of quantitative research techniques enabled the efficient analysis of a large volume of data, albeit with the drawback of potentially lacking detailed explanations for participants' choices. To overcome this limitation, open-ended questions were incorporated into the questionnaire, allowing participants to offer more elaborate feedback. To ensure impartiality, the study embraced a diverse and representative sample of 396 participants from various countries. The questionnaire was meticulously structured, encompassing all pertinent aspects of the research topic through clear and succinct questions. By amalgamating qualitative and quantitative research methodologies, the study attained a holistic understanding of the subject matter. Qualitative data furnished intricate insights, while quantitative data facilitated statistical analysis [10].

Thematic analysis was employed to scrutinize the data garnered from interviews. The researcher transcribed and meticulously reviewed the responses to ensure accuracy. By coding the data and scrutinizing it for similarities, main themes and sub-themes emerged. The study effectively presented its findings through Table 1, which succinctly summarized the main themes and sub-themes uncovered [10]. Experts stress the necessity of establishing Gen AI and strategizing for the future. AI technology plays a central role in driving innovation, improving products and services, and streamlining operations. Consequently, it's vital for businesses to keep pace with the latest technological advancements and actively explore new technologies to leverage their potential benefits. However, it's equally crucial for the industry to remain mindful of the ethical implications associated with technology use, ensuring alignment with core values. While technology offers numerous opportunities for businesses, it's essential to approach its implementation thoughtfully, considering the potential risks and impacts it may entail [11].

Table 1: Interview Summary.

Interviewee no, (Experience in years), Designation, Location	Main Comments on Light and Shadows of GenAI (Other Interviewees agreeing to these comments)
1. [11] CEO, Logistics Solutions, Dubai	- Gen AI has the ability to generate novel ideas, designs, and solutions that may not have been conceivable through traditional means. - It empowers individuals and organizations to explore new frontiers of creativity, driving innovation across industries. - Through automation and optimization, Gen AI streamlines processes, enhances productivity, and reduces operational costs. - It enables businesses to achieve higher efficiency levels, freeing up human resources for more strategic tasks. - AI-powered autonomous weapons systems can independently select and engage targets without direct human intervention. These systems could include drones, unmanned ground vehicles, and autonomous submarines equipped with sensors and weapons. They can be deployed for surveillance, reconnaissance, and offensive operations with increased precision and reduced human risk. (Interviewee 5, 9, 11) (Abaimov et al., 2020)
2. [10], VP, Merchant Banker, Sharjah	- The automation enabled by Gen AI has the potential to disrupt traditional job markets, leading to job displacement and economic inequality. - Low-skilled workers are particularly vulnerable to being replaced by AI-driven systems, exacerbating socioeconomic disparities. - Given the global nature of AI development and deployment, governments need to engage in international collaboration and standards setting to address common challenges and harmonize regulatory approaches. - Emotional AI, also known as affective computing, focuses on enabling AI systems to recognize, interpret, and respond to human emotions effectively. - Universal AI is capable of autonomous learning, reasoning, and problem-solving, enabling it to acquire new knowledge and skills independently. (Interviewee 3, 6, 10), (Deschacht, 2021); (Korteling et al., 2021).
3. [14], CEO, IT solution Company, Mumbai	- Gen AI's reliance on vast amounts of data raises serious privacy and security concerns. - Unauthorized access to sensitive information, data breaches, and malicious use of AI pose significant risks to individuals' privacy and the integrity of organizational systems. - Participating in international forums, such as the OECD AI Policy Observatory and the Global Partnership on AI (GPAI), can facilitate knowledge sharing, policy coordination, and the development of common standards and best practices. - Universal AI can generate novel ideas, solutions, and insights, driving innovation and creativity in ways that surpass human capabilities. - AI can be used to predict equipment failures and optimize maintenance schedules for military vehicles, aircraft, and other critical assets. By analyzing sensor data and historical maintenance records, AI algorithms can identify potential issues before they occur, reducing downtime and improving operational readiness. - Gen AI could be used to generate synthetic identities, fingerprints, or facial images for fraudulent purposes, leading to identity theft and financial fraud on a massive scale. (Interviewee 1, 4, 8, 9) (Chen et al., 2024); (Thisarani et al., 2021)
4. [16] Senior Vice President, Health care Company, Muscat	- Businesses will continue to leverage Gen AI to enhance personalized experiences for their customers. This includes tailoring products, services, and marketing efforts based on individual preferences, behaviors, and needs. - Emotion Recognition: Emotional AI enables AI systems to recognize facial expressions, vocal cues, and other physiological signals to infer human emotions accurately. - With the ability to create highly realistic fake images, videos, and text, Gen AI could be used maliciously to spread misinformation, manipulate public opinion, and even fabricate evidence. This poses serious threats to trust, democracy, and social cohesion. - Deepfake technology, a subset of Gen AI, allows for the creation of incredibly realistic videos showing individuals saying or doing things they never actually did. These could be weaponized for blackmail, defamation, or political sabotage. - Gen AI will enable more sophisticated recommendation systems, chatbots, and virtual assistants that can understand and respond to customers in a highly personalized manner. (Interviewee 1, 7, 13) (Ferraro et al., 2024).

5. [9] HR Director Education sector, Abu Dhabi	- Gen AI has the potential to revolutionize healthcare, from diagnosis and treatment to drug discovery and personalized medicine. - Gen AI accelerates research processes, improves patient care, and enhances overall healthcare outcomes. - AI-driven research in the life sciences, including genomics, synthetic biology, and bioinformatics, could be dual-use in nature, meaning it has both beneficial and harmful applications. - The potential for indiscriminate harm, civilian casualties, and long-term environmental damage underscores the need for robust ethical guidelines, international treaties, and regulatory oversight. - AI algorithms can be exploited to spread disinformation, fake news, and propaganda on a massive scale, influencing public opinion, elections, and social discourse. Social media platforms, chatbots, and recommendation systems can amplify divisive narratives, polarize communities, and undermine trust in democratic institutions. - Promote transparency and accountability in AI development and deployment processes. Require developers and users to disclose information about AI systems, including their capabilities, limitations, and potential risks. Establish mechanisms for auditing, monitoring, and evaluating AI algorithms to ensure they operate fairly, reliably, and ethically. (Interviewee 4, 6, 11, 12), (Lee et al., 2021); (Konda, 2022).
6. [10] Administration Vice President, Education sector, London, UK	- Governments can invest in building AI expertise and capacity within regulatory agencies, policymaking bodies, and law enforcement agencies to effectively govern GenAI. - Balancing the need for data access with privacy concerns, addressing data biases and disparities, and ensuring data security and confidentiality pose challenges for governments in data governance. - Training programs, workshops, and collaborations with academic and industry partners can help build the necessary knowledge and skills to address AI-related challenges. - Emotional AI facilitates more empathetic and human-like interactions between AI systems and users, enhancing user experience and engagement. - Gen AI becomes more sophisticated, there are concerns about its potential to breach privacy by generating synthetic content based on private data, such as personal photos or conversations, without consent. (Interviewee 2, 8, 12, 13), (Rostami et al., 2023).
7. [12] General Manager Consultant Services Australia	- By analyzing vast amounts of data, Gen AI provides valuable insights and predictive analytics, empowering decision-makers with actionable intelligence. - Gen AI facilitates data-driven decision-making, leading to more informed strategies and outcomes - Emotional AI enables AI systems to tailor responses and recommendations based on users' emotional states, preferences, and needs. - Gen AI models themselves can be vulnerable to attacks, such as adversarial examples designed to fool them or poisoning attacks to manipulate their training data. Ensuring the security and robustness of these systems is a significant challenge. (Interviewee 1, 5, 9,13) (Puttagunta et al., 2023)
8. [9] Head of University IT Operations, Dubai	- Gen AI enables hyper-personalized experiences for consumers, catering to their individual preferences and needs. - This personalized approach enhances customer satisfaction and loyalty, fostering stronger relationships between businesses and their clientele. - Governments can play a role in promoting ethical AI principles and standards among businesses, research institutions, and AI developers. - Ethical Gen AI development is an ongoing process that requires continuous monitoring, evaluation, and improvement to address emerging ethical challenges and societal concerns. - Gen AI has the capability to generate vast amounts of diverse content, ranging from images and videos to text and music. This explosion of creativity could overwhelm traditional content creation methods and disrupt industries reliant on human-generated content. - Policymakers and regulators face the daunting task of keeping pace with the rapid development of Gen AI technology to enact appropriate regulations and safeguards to protect individuals and society. (Interviewee 4, 7, 11, 13), (Walter, 2024)

9. [10] International Consultant, London, UK	- Gen AI introduces complex ethical dilemmas, such as the potential for AI to manipulate human behavior, infringe on autonomy, or challenge fundamental notions of morality and decision-making. - Addressing these ethical concerns requires careful consideration and proactive measures. - Automation of retail tasks through AI-driven systems may lead to job displacement for retail workers, particularly in roles such as cashiering and stocking. - Stakeholders should engage in interdisciplinary dialogue and collaboration to identify ethical dilemmas, share best practices, and develop guidelines and standards for ethical Gen AI deployment. - Consideration of the broader societal impact and implications of Gen AI deployment is essential to promote social justice, equity, and the public good. - Ensuring the safety and reliability of Gen AI systems is essential to prevent unintended consequences and minimize risks to individuals and society. - Governments need to develop comprehensive regulatory frameworks to govern the development, deployment, and use of GenAI across various sectors. (Interviewee 2, 8, 9, 13) (Zhang et al., 2024)
10. [11] Vice President Environmental Group, Mumbai	- As Gen AI evolves; the development of autonomous systems raises questions of accountability and responsibility. - Accidents or errors caused by AI-driven technologies may lead to legal and ethical dilemmas regarding liability and culpability. - AI-driven diagnostics improve accuracy and efficiency in disease detection and treatment planning. - Developing regulations that strike the right balance between fostering innovation and protecting societal interests can be challenging. Additionally, keeping regulations updated and adaptive to rapid technological advancements is crucial. - Governments can invest in research and development initiatives to advance AI technologies while addressing ethical, safety, and societal concerns. - Governments can establish data governance frameworks that promote responsible data collection, sharing, and use while protecting individuals' privacy rights. - Universal AI transcends the narrow domain-specific capabilities of current AI systems, exhibiting general intelligence and adaptability across a wide range of tasks and contexts. - AI can be employed in offensive and defensive cyber operations to detect and mitigate cyber threats, including malware, phishing attacks, and network intrusions. AI-powered algorithms can analyze network traffic patterns, identify anomalous behavior, and autonomously respond to cyberattacks in real-time. (Interviewee 1, 8, 9, 12), (Da Fonseca et al., 2023); (Markevych et al., 2023).
11. [16] CEO, HSE Agency, Singapore	- The adoption of Gen AI raises profound ethical implications that demand attention and deliberation. - Ensuring fairness, transparency, and accountability in AI systems is crucial to mitigate biases and discriminatory outcomes. - Protecting individuals' privacy rights and data security requires robust regulations and safeguards. - Promoting ethical AI development involves interdisciplinary collaboration, involving ethicists, policymakers, technologists, and stakeholders to establish guidelines and best practices. - Gen AI algorithms analyze customer data to provide personalized product recommendations, enhancing the shopping experience. - The development of universal AI raises profound ethical and societal implications, including concerns about control, autonomy, existential risk, and the potential impact on employment, economics, and governance. - AI-powered decision support systems can assist military commanders in making informed decisions by analyzing complex data and providing actionable insights. These systems can incorporate various data sources, including intelligence reports, satellite imagery, and weather forecasts, to assess risks, identify opportunities, and formulate strategies. - AI can be used to develop sophisticated anonymization techniques that help users conceal their identity and activities on the dark web. This includes methods such as obfuscating IP addresses, encrypting communication, and generating fake digital identities, making it harder for law enforcement agencies to track and identify individuals engaged in illicit activities. - AI algorithms used in robotic systems can exhibit bias and discrimination, leading to unfair or discriminatory outcomes. If these biases are not addressed, AI-powered robots may perpetuate and amplify existing social inequalities, particularly in areas such as law enforcement, hiring, and healthcare, where biased decision-making can have serious consequences for individuals' lives. (Interviewee 1, 5, 7, 9, 15), (Turner et al., 2024); (Binhammad et al., 2024).

12. [7] Senior President, Corporate Services Dubai	- To harness the full potential of Gen AI while mitigating its risks, a balanced approach is essential. - This entails investing in research and development to enhance AI transparency, fairness, and accountability. - It involves fostering collaboration between industry, academia, and government to establish regulatory frameworks and ethical guidelines. - Additionally, promoting digital literacy and education empowers individuals to navigate the complexities of AI responsibly. - Gen AI enables the analysis of genetic data to tailor treatments and interventions based on individual patients' genetic profiles. - The transformation to universal AI represents a paradigm shift in the capabilities and role of AI, marking a transition from specialized tools to autonomous, self-improving entities with human-level or superhuman intelligence. - The concept of technological singularity, where AI surpasses human intelligence and initiates an era of rapid and unpredictable change, is closely associated with the transformation to universal AI. (Interviewee 1, 6, 8, 13), (Nguyen et al., 2023); (Filimowicz, 2023).
13. [8] Senior Logistics Director, Fujairah	- Gen AI enables the analysis of genetic data to tailor treatments and interventions based on individual patients' genetic profiles. - Protecting financial data from cyberattacks and ensuring the integrity of AI-driven systems are critical concerns for the finance industry. - AI can be used in humanitarian assistance and disaster response missions to analyze satellite imagery, assess damage, and prioritize relief efforts. AI algorithms can also support search and rescue operations by analyzing data from drones, sensors, and social media to locate survivors in disaster zones. - AI-driven simulations can provide realistic training environments for military personnel to practice tactical maneuvers, mission planning, and scenario-based exercises. These simulations can adapt to the actions of trainees, providing personalized feedback and accelerating skill development. (Interviewee 2, 7, 10, 14), (Curran, 2024)
14. [4] Vice President, Private Finance Group, Dubai	- Gen AI algorithms can inherit biases from the data they are trained on, leading to discriminatory outcomes. - This raises concerns about fairness and equity, especially in areas such as hiring, lending, and criminal justice, where biased decisions can have significant social ramifications- These practices foster social cohesion, resource-sharing, and collective decision-making, promoting a sense of ownership and responsibility for sustainable development. - AI-driven simulations and modeling accelerate the drug discovery process, leading to the development of new treatments and therapies. - Access to sensitive patient data raises concerns about privacy and security breaches. - AI algorithms are trained on biased datasets; they may perpetuate disparities in healthcare outcomes across different demographic groups. (Interviewee 3, 5, 12, 13) (González-Sendino et al., 2024); (Chakravarty et al., 2021); (Kundi et al., 2023).
15. [8] Start-up Entrepreneur in Gaming, Mumbai	- AI-driven risk assessment models help financial institutions evaluate creditworthiness and detect fraudulent activities. - Addressing the challenges and risks associated with universal AI requires robust governance frameworks, international cooperation, and careful consideration of ethical, legal, and societal implications. - Influence of Generative AI on cultural production, artistic expression, and social interactions. - Ensuring compliance with regulations such as HIPAA (Health Insurance Portability and Accountability Act) while implementing AI in healthcare is crucial to protect patient privacy and safety. - The emergence of universal AI raises profound questions about consciousness, morality, identity, and the nature of intelligence, challenging fundamental assumptions about what it means to be human. - The increasing integration of AI-driven robots into various aspects of society, such as eldercare, childcare, and companionship, raises concerns about depersonalization and social isolation. While robots can provide valuable assistance and support, they may also substitute human interaction and empathy, leading to feelings of loneliness and disconnection, particularly among vulnerable populations (Interviewee 2, 7,11, 15), (Gautam et al., 2023); (Epstein et al., 2023); (Ganapathy, 2022)

Note: Source: Developed by the Author

Quantitative Analysis using ADANCO Output

Analysis of the Measurement Model

In addition to utilizing the Dijkstra-Henseler's rho (ρA) coefficient and AVE values, the study also incorporated discriminant validity analysis to ensure the distinctiveness of the constructs. The findings from the discriminant validity analysis indicated that the correlations within each construct were higher than those with other constructs, thereby confirming good discriminant validity. Furthermore, the study employed structural equation modeling (SEM) as a well-established statistical technique to test hypotheses and explore the relationships among the constructs. SEM is capable of handling complex models and examining multiple relationships simultaneously, making it an appropriate and fruitful choice for this study. Its application provided a comprehensive understanding of the connections between the constructs. In summary, the study implemented sound and established methods to assess construct validity, convergent validity, and discriminant validity. The use of SEM facilitated a comprehensive investigation into the relationships among the constructs, yielding valuable insights into the Big Data Model. [10].

In PLS path modeling, determining construct validity often involves the use of indicator variables and their outer loading values. This approach is widely acknowledged and accepted within the field (Table 2). Typically, a standardized outer loading value of 0.70 or higher is considered acceptable as an indication of a quality measure. This value signifies that the indicator variable effectively represents the construct being measured. To present the outer loading values for each indicator variable, Table 3 is employed in this study. This presentation method offers a clear and concise overview, which facilitates easy comprehension and interpretation of the data. It significantly contributes to the effectiveness of construct validity assessment (Table 4). In general, the appropriate and successful application of indicator variables and their outer loading values is demonstrated in this study, as the results indicate that the indicator variables served as reliable measures for their respective constructs, surpassing the threshold of 0.7 [12].

Table 2: Analysis of Measurement Model.

Latent Variables	Convergent Validity		Construct reliability	
	AVE >0.50	ρA reliability >0.70	Pc reliability >0.70	Cronbach's alpha(α) >0.70
Creativity Enhancement Factors	0.5087	0.7321	0.8076	0.8341
Productivity Improvement Factors	0.5543	0.7259	0.7654	0.7659
Privacy Concerns Factors	0.5675	0.8125	0.8235	0.7896
Bias and Discrimination Factors	0.5432	0.7985	0.8321	0.8125
Successful Implementation of AI in Innovation and Creativity Project Factors	0.5269	0.8087	0.8432	0.8098

Note: Source: ADANCO result, 2023

Table 3: Shows the Discriminant Validity heterotrait-monotrait ratio.

Construct	Creativity Enhancement Factors	Productivity Improvement Factors	Privacy Concerns Factors	Bias and Discrimination Factors	Successful Implementation of AI in Innovation and Creativity Project Factors
Creativity Enhancement Factors					
Productivity Improvement Factors	0.7841				
Privacy Concerns Factors	0.7535	0.8215			
Bias and Discrimination Factors	0.6489	0.7547	0.8197		
Successful Implementation of AI in Innovation and Creativity Project Factors	0.6143	0.6876	0.7541	0.8337	

Note: Source: ADANCO results, 2023

Table 4: Direct Effect Interference.

Effect	Original coefficient β	Standard bootstrap results				
		Mean value	Standard error	t-value	p-value (2-sided)	Hypotheses Supported
Creativity Enhancement Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors Factors	0.217	0.1978	0.0451	5.327	0.001	Yes
Productivity Improvement Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors	0.425	0.4048	0.0221	5.458	0.003	yes
Bias and Discrimination Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors	0.479	0.2821	0.0324	15.365	0.0000	Yes
Creativity Enhancement Factors -> Productivity Improvement Factors	0.198	0.0868	0.0443	7.684	0.0000	Yes
Bias and Discrimination Factors -> Creativity Enhancement Factors	0.343	0.1890	0.0402	5.274	0.0000	yes
Bias and Discrimination Factors -> Productivity Improvement Factors	0.574	0.3245	0.1054	11.461	0.0011	yes
Privacy Concerns Factors -> Bias and Discrimination Factors	0.365	0.2556	0.1037	7.927	0.0042	yes
Privacy Concerns Factors -> Productivity Improvement Factors	0.441	0.1432	0.1520	13.765	0.0000	yes

Note: Source: ADANCO results, 2023

All p-values indicating the validity of the relationships are well below the significance level of 0.05, providing strong support for the hypotheses. The results data not only support but also authenticate all the hypotheses, as mentioned by Hair et al. (2022). Table 5 presents the discriminant validity measures, which assess the degree of correlation between a variable and other variable in the structural model. These measures are evaluated using the Fornell-Larcker criterion and cross-loadings (Figure 1). The diagonal bold figures in the (Table 6) represent the highest values in both the rows and columns, indicating strong evidence of discriminant validity. The analysis was conducted using ADANCO 2.3 output, as described by Sarstedt et al. (2022). (Table 7) shows the cross loadings to see the impact of the variables on each other. The coefficient of determination (R^2) explains the construct relationship to all the constructs in the research study. The minimum requirement of R^2 was 0.25, and the construct was relevant and significant if the value of R^2 exceeded 0.25 [13]. Based on the result, the value of R^2 of Resilient Supply chain was 0.7654, which means that the construct is relevant and significant, and considered high in explaining all the variables in the research.

Table 5: Discriminant Validity.

Construct	Creativity Enhancement Factors	Productivity Improvement Factors	Privacy Concerns Factors	Bias and Discrimination Factors	Successful Implementation of AI in Innovation and Creativity Project Factors
Creativity Enhancement Factors	0.5568				
Productivity Improvement Factors	0.5198	0.6321			
Privacy Concerns Factors	0.5654	0.6134	0.7765		
Bias and Discrimination Factors	0.5457	0.5805	0.7213	0.8118	
Successful Implementation of AI in Innovation and Creativity Project Factors	0.5128	0.5765	0.6876	0.7461	0.8478

Table 6: Loadings of Indicator Loadings.

Indicator	Creativity Enhancement Factors	Productivity Improvement Factors	Privacy Concerns Factors	Bias and Discrimination Factors	Successful Implementation of AI in Innovation and Creativity Project Factors
(CEF1)	0.7037				
(CEF2)	0.7344				
(CEF3)	0.6534				
(CEF4)	0.7643				
(CEF5)	0.7465				
(PIF1)		0.7665			
(PIF2)		0.7443			
(PIF3)		0.7298			
(PIF4)		0.6983			
(PIF5)		0.7325			
(PCF1)			0.6745		
(PCF2)			0.7332		
(PCF3)			0.7541		
(PCF4)			0.6868		
(PCF5)			0.6871		
(BDF1)				0.7543	
(BDF2)				0.7459	
(BDF3)				0.6289	
(BDF4)				0.6987	
(BDF5)				0.7098	
(BDF6)				0.7453	
(SIAICP1)					0.7543
(SIAICP2)					0.7126
(SIAICP3)					0.6589
(SIAICP14)					0.7675
(SIAICP5)					0.7432
(SIAICP6)					0.7043
(SIAICP7)					0.7911

Table 7: R- Squared.

Construct	Coefficient of determination (R^2)	Adjusted R^2
Creativity Enhancement Factors	0.543	0.519
Productivity Improvement Factors	0.335	0.302
Privacy Concerns Factors	0.469	0.439
Bias and Discrimination Factors	0.511	0.485
Successful Implementation of AI in Innovation and Creativity Project Factors	0.759	0.7264

So, the above research framework was developed and tested for validity and reliability using PLS-SEM has been a useful contribution of this research paper and by getting a consensus of 396 respondents-stakeholders of the Supply chain and Logistics sector. The methodology followed goes a long way in addressing the scarcity of relevant data for future researchers and lays the path for further research by developing on this model or such similar models. The above-cited theories have their importance in a particular situation in stable economies, equal education opportunities, infrastructure availability. However, in recession, COVID, sanction regimes, these above theories seem lacking to explain many factors (Table 8). Hence some concrete, a sound research-based framework has been developed to contribute to further work [10]. The third level relationships are not relevant as the β value tends to be below the 0.01 levels hence not considered for this study [10]. Table summarizes the Similarity in the Outcomes ascertained by Qualitative and Quantitative methodologies.

Table 8: Showing the Direct Relationships.

Hypotheses no	Construe Description	β- value	t-value	Significance t ≥2.59 1.96 ≤ t ≤2.59	Hypotheses Supported or not supported
H1	Creativity Enhancement Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors	0.277	6.347	Strong	Yes
H2	Productivity Improvement Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors	0.425	5.458	Strong	Yes
H3	Privacy Concerns Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors	0.00	0.00	No	No
H4	Bias and Discrimination Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors	0.427	12.651	Strong	Yes

Hypotheses

• H1- Successful implementation of AI in innovation and creativity projects is significantly influenced by several key factors. Data-driven insights provide a robust foundation for informed decision-making by uncovering patterns and trends; generative models enhance ideation by creating novel and diverse possibilities; collaborative tools facilitate seamless communication and knowledge sharing among team members, fostering a more integrated and dynamic workflow; employee capabilities ensure that the workforce is equipped with the necessary skills to leverage AI tools effectively; and individual innovation drives unique contributions and creative problem-solving, ensuring that AI is harnessed in ways that push the boundaries of traditional innovation processes (Table 9). Together, these elements create a synergistic environment where AI can be maximally utilized to boost creativity and drive successful project outcomes [14-20].

• H2- Successful implementation of AI in innovation and creativity projects is greatly influenced by productivity improvement factors such as process automation, which streamlines routine tasks and frees up time for creative endeavors; predictive analytics, which provides foresight and data-driven guidance to inform strategic decisions; personalized assistance, which tailors AI tools and recommendations to individual needs, enhancing efficiency and effectiveness; excellent teamwork, which ensures cohesive collaboration and the effective integration of diverse ideas and skills; and strong management support, which provides the necessary resources, encouragement, and alignment with organizational goals. Together, these factors create a conducive environment for AI to enhance productivity and drive innovation (Figure 2).

• H3- Successful implementation of AI in innovation and creativity projects is influenced by addressing privacy concerns through robust data security measures that protect sensitive information from breaches; data minimization practices that reduce the amount of data collected to only what is necessary; anonymization and encryption techniques that safeguard personal identities and secure data in transit and storage; adherence to government regulations ensuring compliance with legal standards and building trust; and staying abreast of technology advancements that offer enhanced privacy protection solutions. These factors collectively ensure that privacy is maintained, fostering a trustworthy environment essential for leveraging AI effectively in innovative and creative endeavors (Table 10).

• H4- Successful implementation of AI in innovation and creativity projects requires addressing bias and discrimination through several key factors: ensuring training data is diverse and representative to mitigate inherent biases; promoting algorithmic fairness to create equitable AI models; maintaining transparency and accountability to build trust and allow for scrutiny of AI decisions; ensuring broad data availability and careful neural network training to enhance model accuracy and inclusiveness; and adhering to ethical standards and societal expectations to align AI outcomes with moral and social values. These measures collectively help prevent biased outcomes, fostering a fair and inclusive environment conducive to innovation and creativity [21-35].

Table 9: Indirect relationships.

Hypotheses No	Construe Description	β- value	t-value	Significance t ≥1.96	Hypotheses Supported or not supported
H52	Creativity Enhancement Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors through Productivity Improvement Factors	0.093	4.598	Strong	Yes
H61	Bias and Discrimination Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors through Creativity Enhancement Factors	0.074	7.322	Strong	Yes
H72	Bias and Discrimination Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors through Productivity Improvement Factors	0.211	6.437	Strong	Yes
H84	Privacy Concerns Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors through Bias and Discrimination Factors	0.175	5.754	Strong	Yes
H92	Privacy Concerns Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors through Productivity Improvement Factors	0.185	7.057	Strong	Yes
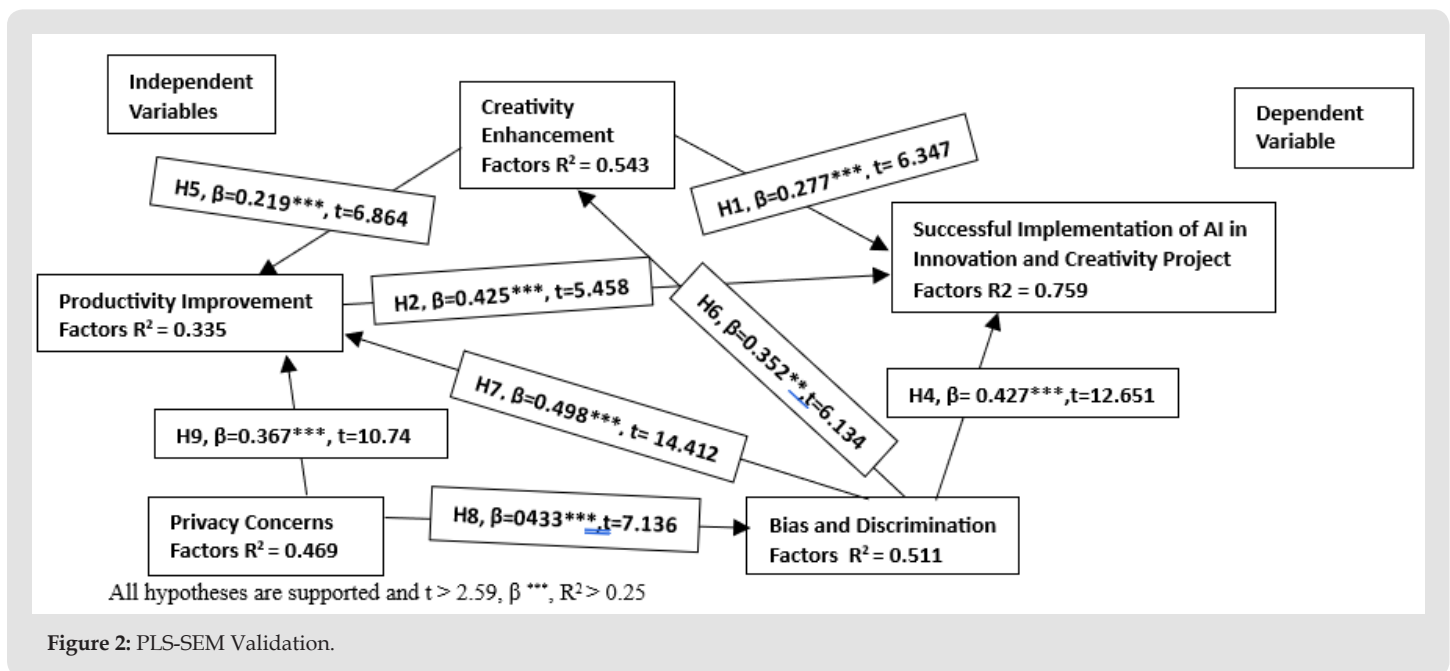
Figure 2: PLS-SEM Validation.

Table 10: Similarity in Outcomes.

Qualitative Outcomes
Creativity Enhancement Factors (CEF)
Productivity Improvement Factors (PIF)
Privacy Concerns Factors (PCF)
Bias and Discrimination Factors (BDF)
Successful Implementation of AI in Innovation and Creativity Project Factors (SIAICP)

Quantitative Outcomes (all t > 2.59 and so supported except H3)
H1- Creativity Enhancement Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors, $\beta_{CEF - SIAICP}$ = 0.277, t=6.347 indicates a Strong relationship.
H2- Productivity Improvement Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors, $\beta_{PIF - SIAICP}$ = 0.425, t= 5.458, indicates a Strong relationship.
H3- Privacy Concerns Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors, $\beta_{PCF - SIAICP}$ = 0.00, t= 0.00, indicates no direct relationship
H4- Bias and Discrimination Factors -> Successful Implementation of AI in Innovation and Creativity Project Factors, $\beta_{BDF - SIAICP}$ = 0.427, t= 12.651, indicates a Strong relationship
H52- Creativity Enhancement Factors _ Productivity Improvement Factors _ Successful Implementation of AI in Innovation and Creativity Project Factors, $\beta_{CEF - PIF - SIAICP}$ = 0.093, t= 4.598, indicates a Strong relationship (t > 2.59).
H61 – Bias and Discrimination Factors _ Creativity Enhancement Factors _ Successful Implementation of AI in Innovation and Creativity Project Factors, $\beta_{BDF - CEF - SIAICP}$ = 0.074, t= 7.322, indicates a Strong relationship (t > 2.59).
H72- Bias and Discrimination Factors _ Productivity Improvement Factors _ Successful Implementation of AI in Innovation and Creativity Project Factors, $\beta_{BDF-PIF-SIAICP}$ = 0.211, t= 6.437, indicates a Strong relationship (t > 2.59).
H84- Privacy Concerns Factors _ Bias and Discrimination Factors _ Successful Implementation of AI in Innovation and Creativity Project Factors, $\beta_{PCF-BDF- SIAICP}$ = 0.175, t= 5.754, indicates a Strong relationship (t > 2.59).
H92- Privacy Concerns Factors _ Productivity Improvement Factors _ Successful Implementation of AI in Innovation and Creativity Project Factors, $\beta_{PCF-PIF- SIAICP}$ = 0.185, t= 7.057, indicates a Strong relationship (t > 2.59).
This coincides exactly with both the methodologies so; it is validated, and reliability tested to greater extent (Stentoft et al., 2018)

The main areas of disagreement in both the methodologies are much less restrictive to the None (no direct significance) i.e., H3 in Direct relationship Table and has established indirect relationship, as seen in Table H84 and H92 through the Bias and Discrimination Factors and Productivity Improvement Factors, seen in the Quantitative methodology (proven statistically). However, the indirect relationship displays there exists a relationship. The difference in outcomes can be attributed to due to the lack of awareness of the stakeholders (Participants of the Survey) on the Resilient AI systems used in various Sector applications, whereas the top management of various sector and experts (Participants of the Interviews) have exposure to the issues. Another area is sustainability; most stakeholders only know this as Ethics and Misuse of AI and do not understand the green initiative values and modes that are possible () The findings highlight the potential of generative AI to foster creativity and innovation while raising concerns about privacy, bias, and societal disruption. Stakeholders must navigate these complexities to harness the benefits of generative AI responsibly.

Conclusion and Recommendation

Implications of this Research

Practical Implications: The research on "Light and Shadows of Generative AI for Individuals, Organizations, and Society" reveals several practical implications. For individuals, generative AI can enhance creativity and necessitate continuous skill development while raising privacy concerns due to extensive data use. Organizations can benefit from accelerated innovation and operational efficiency, but must address ethical and bias challenges, and manage workforce transformation through reskilling initiatives. Societally, generative AI promises economic growth but may cause job displacement, necessitating new employment policies and equitable access to technology to prevent socio-economic disparities. Additionally, comprehensive regulatory frameworks are essential to align AI development with societal values, and cultural and ethical considerations must be navigated to balance innovation with respect for human creativity and originality. These implications underscore the need for a balanced approach in adopting generative AI, considering both its potential benefits and the challenges it poses across different levels. Knowing the challenges of generative AI of privacy concerns due to extensive data usage, the need for continuous skill development, ethical and bias mitigation, workforce transformation, potential job displacement, ensuring equitable access to technology, and the necessity for comprehensive regulatory frameworks and cultural and ethical navigation, will help negotiate them better. Stakeholders, including policymakers, educators, and industry leaders, can use the insights from this research to inform decision-making and develop guidelines for the responsible use of generative AI.

Managerial implications: The research on " has several managerial implications like leaders must foster a culture of continuous learning to equip employees with AI-related skills and address privacy concerns by implementing robust data protection measures; they should leverage generative AI to drive innovation and operational efficiency while proactively addressing ethical and bias-related challenges to maintain fairness and inclusivity; strategic reskilling initiatives are essential to manage workforce transformation; managers must also advocate for equitable access to AI technologies to prevent socio-economic disparities and engage in developing comprehensive regulatory frameworks to ensure AI aligns with societal values, balancing technological advancement with ethical considerations and respect for human creativity. Managers must recognize the potential

of generative AI to enhance creativity and innovation within their organizations while acknowledging the importance of continuous skill development among employees and the need to address privacy concerns associated with extensive data usage. They should prioritize the implementation of robust ethical and bias mitigation strategies, facilitate workforce transformation through strategic reskilling initiatives, and ensure equitable access to AI technologies to prevent socio-economic disparities. Moreover, managers must navigate the complexities of regulatory frameworks and cultural and ethical considerations, striving to balance innovation with respect for human creativity and originality [36-40]. These implications highlight the critical role of managers in fostering responsible and inclusive adoption of generative AI within their organizations and broader society. Organizations must consider the ethical and societal implications of deploying generative AI technologies in their operations and develop strategies to mitigate risks and ensure responsible AI governance.

Social Implications: While generative AI holds promise for driving economic growth and fostering innovation, it also presents challenges such as job displacement and potential exacerbation of socio-economic disparities. Ensuring equitable access to AI technologies is crucial to prevent widening societal divides. Moreover, the cultural and ethical considerations surrounding AI-generated content must be carefully navigated to preserve human creativity and originality. Comprehensive regulatory frameworks are essential to govern the development and deployment of generative AI, safeguarding against ethical lapses and ensuring alignment with societal values. Ultimately, addressing these social implications requires a concerted effort from policymakers, industry leaders, and society as a whole to harness the benefits of generative AI while mitigating its adverse effects on individuals and communities. Generative AI has the potential to reshape social interactions, cultural production, and economic systems, impacting individuals and communities worldwide.

Limitations and Future Research

Firstly, the research primarily focuses on theoretical implications and may lack empirical validation from real-world applications. Additionally, the rapid evolution of generative AI technologies means that the findings may become outdated quickly, necessitating ongoing research to stay abreast of advancements. Moreover, the study predominantly examines the perspectives of developed countries, potentially overlooking the unique challenges and opportunities faced by developing nations. Future research should aim to address these limitations by conducting longitudinal studies to track the evolving impacts of generative AI over time, incorporating empirical data from diverse geographic regions and socio-economic contexts, and exploring the implications of emerging AI technologies beyond the scope of the current study, such as reinforcement learning and neurosymbolic AI. Furthermore, interdisciplinary collaborations between researchers from fields such as computer science, ethics, sociology, and policy analysis are essential to comprehensively understand the multifaceted implications of generative AI on individuals, organizations, and society.

The Contribution and Originality

Value of the Research

Firstly, the study offers a comprehensive examination of the multifaceted impacts of generative AI across different levels—individuals, organizations, and society—providing a holistic understanding of its implications. Furthermore, the study delves into the ethical, cultural, and regulatory challenges associated with generative AI, shedding light on critical considerations often overlooked in discussions centered solely on technological advancement. Additionally, by addressing the potential "shadows" or negative consequences alongside the "light" or benefits of generative AI, the research promotes a balanced perspective, encouraging stakeholders to approach AI adoption with caution and responsibility. Overall, the study's originality lies in its interdisciplinary approach, bridging insights from computer science, ethics, sociology, and policy analysis to offer valuable insights into the complex interplay between technology and society. Its contribution lies in its ability to inform decision-makers, policymakers, and researchers about the nuanced implications of generative AI, facilitating informed discussions and guiding responsible AI deployment strategies for the betterment of individuals, organizations, and society as a whole.

Conclusion

In conclusion, the study on "Light and Shadows of Generative AI for Individuals, Organizations, and Society" highlights the nuanced landscape of opportunities and challenges presented by generative AI across various societal domains. Through a mixed methodology approach, incorporating theoretical analysis and empirical insights, the Researchers have elucidated the multifaceted impacts of generative AI on individuals, organizations, and society. By recognizing both its potential "light" in fostering innovation, enhancing productivity, and driving economic growth, as well as its "shadows" in terms of ethical dilemmas, privacy concerns, and socio-economic disparities, stakeholders are better equipped to navigate the complexities of AI governance. This balanced understanding underscores the importance of informed decision-making and proactive measures to maximize the benefits of generative AI while mitigating its risks. Moving forward, it is imperative for policymakers, industry leaders, and researchers to collaborate in shaping inclusive regulatory frameworks, promoting ethical AI practices, and fostering equitable access to technology. By doing so, we can harness the transformative potential of generative AI for the betterment of individuals, organizations, and society, ensuring a brighter and more equitable future for all.

References

1. Akinrinola O, Okoye CC, Ofodile OC, Ugochukwu CE (2024) Navigating and reviewing ethical dilemmas in AI development: Strategies for transparency, fairness, and accountability. GSC Advanced Research and Reviews 18(3): 050-058.

2. Sonko S, Adewusi AO, Obi OC, Onwusinkwue S, Atadoga A (2024) A critical review towards artificial general intelligence: Challenges, ethical consid-

erations, and the path forward. World Journal of Advanced Research and Reviews 21(3): 1262-1268.

3. Díaz Rodríguez N, Del Ser J, Coeckelbergh M, de Prado ML, Herrera Viedma E, et al. (2023) Connecting the dots in trustworthy Artificial Intelligence: From AI principles, ethics, and key requirements to responsible AI systems and regulation. Information Fusion 99: 101896.

4. Abdikhakimov I (2023) Unraveling the Copyright Conundrum: Exploring AI-Generated Content and its Implications for Intellectual Property Rights. In International Conference on Legal Sciences 1(5): 18-32.

5. Huang K, Joshi A, Dun S, Hamilton N (2024) AI Regulations. In: Huang K, Wang Y, Goertzel B, Li Y, Wright, S, Ponnapalli J (Eds.)., Generative AI Security. Future of Business and Finance.

6. Botega LFdC, da Silva JC (2020) "An artificial intelligence approach to support knowledge management on the selection of creativity and innovation techniques". Journal of Knowledge Management 24(5): 1107-1130.

7. Gupta K, Mane P, Rajankar OS, Bhowmik M, Jadhav R, et al. (2023) Harnessing AI for strategic decision-making and business performance optimization. International Journal of Intelligent Systems and Applications in Engineering 11(10s): 893-912.

8. Pratomo AB, Mokodenseho S, Aziz AM (2023) Data encryption and anonymization techniques for enhanced information system security and privacy. West Science Information System and Technology 1(01): 1-9.

9. Ferrer X, Van Nuenen T, Such JM, Coté M, Criado N (2021) Bias and discrimination in AI: a cross-disciplinary perspective. IEEE Technology and Society Magazine 40(2): 72-80.

10. Iyer SS, Seetharaman A, Maddulety K, Sharma SK, Dwivedi YK, et al. (2020) Education Transformation Using Block Chain Technology A Student Centric Model. Reimagining Diffusion and Adoption of Information Technology and Systems: A Continuing Conversation. TDIT 2020. IFIP Advances in Information and Communication Technology 617.

11. Allioui H, Mourdi Y (2023) Unleashing the potential of AI: Investigating cutting-edge technologies that are transforming businesses. International Journal of Computer Engineering and Data Science (IJCEDS) 3(2): 1-12.

12. Sarstedt M, Hair JF, Pick M, Liengaard BD, Radomir L, et al. (2022) Progress in partial least squares structural equation modeling use in marketing research in the last decade. Psychology & Marketing 39(5): 1035-1064.

13. Ahmad M, Iram K, Jabeen G (2020) Perception-based influence factors of intention to adopt COVID-19 epidemic prevention in China. Environmental research 190: 109995.

14. Abaimov S, Martellini M (2020) Artificial Intelligence in Autonomous Weapon Systems. In: Martellini M, Trapp R. (Eds.)., 21st Century Prometheus. Springer, Cham. Abaimov S, Martellini M (2020) Artificial intelligence in autonomous weapon systems. 21st Century Prometheus: Managing CBRN Safety and Security Affected by Cutting-Edge Technologies, pp. 141-177.

15. Binhammad M, Alqaydi S, Othman A, Abuljadayel LH (2024) The Role of AI in Cyber Security: Safeguarding Digital Identity. Journal of Information Security 15(02): 245-278.

16. Chakravarty K, Antontsev V, Bundey Y, Varshney J (2021) Driving success in personalized medicine through AI-enabled computational modeling. Drug Discovery Today 26(6): 1459-1465.

17. Chen Y, Esmaeilzadeh P (2024) Generative AI in medical practice: indepth exploration of privacy and security challenges. Journal of Medical Internet Research 26: e53008.

18. Curran D (2024) Learning to protect? Identifying elicitive approaches in Protection of Civilians training for UN peacekeepers Civil Wars, p. 1-27.

19. Da Fonseca AT, Vaz de Sequeira E, Barreto Xavier L (2023) Liability for AI driven systems. In Multidisciplinary Perspectives on Artificial Intelligence and the Law (pp. 299-317). Cham: Springer International Publishing.

20. Deschacht N (2021) The digital revolution and the labour economics of automation: A review. ROBONOMICS: The Journal of the Automated Economy 1: 8-18.

21. Epstein Z, Hertzmann A, Investigators of Human Creativity, Akten M, Farid H, et al. (2023) Art and the science of generative AI. Science 380(6650): 1110-1111.

22. Ferraro C, Demsar V, Sands S, Restrepo M, Campbell C (2024) The paradoxes of generative AI-enabled customer service: A guide for managers. Business Horizons.

23. (2023) In: Filimowicz M (Edt.)., AI and the Future of Creative Work: Algorithms and Society. Taylor & Francis.

24. Ganapathy K (2022) Geriatric Smart home technology implementation are we really there? Smart Home Technologies and Services for Geriatric Rehabilitation, p. 1-24.

25. Gautam A (2023) The evaluating the impact of artificial intelligence on risk management and fraud detection in the banking sector. AI, IoT and the Fourth Industrial Revolution Review 13(11): 9-18.

26. González Sendino R, Serrano E, Bajo J (2024) Mitigating bias in artificial intelligence: Fair data generation via causal models for transparent and explainable decision-making. Future Generation Computer Systems.

27. Hair J, Alamer A (2022) Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. Research Methods in Applied Linguistics 1(3): 100027.

28. Konda SR (2022) Ethical Considerations in the Development and Deployment of AI-Driven Software Systems. International Journal of Computer Science and Technology 6(3): 86-101.

29. Korteling JH, van de Boer Visschedijk GC, Blankendaal RA, Boonekamp RC, Eikelboom AR (2021) Human-versus artificial intelligence. Frontiers in artificial intelligence 4: 622364.

30. Kundi B, El Morr C, Gorman R, Dua E (2023) Artificial Intelligence and Bias: A scoping review. AI and Society, 199-215.

31. Lee D, Yoon SN (2021) Application of artificial intelligence-based technologies in the healthcare industry: Opportunities and challenges. International journal of environmental research and public health 18(1): 271.

32. Markevych M, Dawson M (2023) A review of enhancing intrusion detection systems for cybersecurity using artificial intelligence (ai). In International conference Knowledge-based Organization 29(3): 30-37.

33. Nguyen MT, Tran MQ (2023) Balancing security and privacy in the digital age: an in-depth analysis of legal and regulatory frameworks impacting cybersecurity practices. International Journal of Intelligent Automation and Computing 6(5): 1-12.

34. Puttagunta MK, Ravi S, Nelson Kennedy Babu C (2023) Adversarial examples: attacks and defences on medical deep learning systems. Multimedia Tools Applications 82: 33773-33809.

35. Radanliev P, Santos O, Brandon Jones A, Joinson A (2024) Ethics and responsible AI deployment. Frontiers in Artificial Intelligence.

36. Rostami M, Navabinejad S (2023) Artificial Empathy: User Experiences with Emotionally Intelligent Chatbots. AI and Tech in Behavioral and Social Sciences 1(3): 19-27.

37. Thisarani M, Fernando S (2021) "Artificial Intelligence for Futuristic Banking," 2021 IEEE International Conference on Engineering, Technology and Innovation (ICE/ITMC), Cardiff, United Kingdom, p. 1-13.

38. Turner M, Wong E (2024) Ethical Considerations in AI and ML: Addressing Bias, Fairness, and Accountability in Algorithmic Decision-Making. CINE-FORUM, pp. 144-147.

39. Walter Y (2024) Managing the race to the moon: Global policy and governance in Artificial Intelligence regulation—A contemporary overview and an analysis of socioeconomic consequences. Discover Artificial Intelligence 4(1): 14.

40. Zhang H, Khanal S, Taeihagh A (2024) Public-Private Powerplays in Generative AI Era: Balancing Big Tech Regulation Amidst Global AI Race. Digital Government: Research and Practice.

Submission Link: https://biomedres.us/submit-manuscript.php

Assets of Publishing with us

- Global archiving of articles
- Immediate, unrestricted online access
- Rigorous Peer Review Process
- Authors Retain Copyrights
- Unique DOI for all articles

https://biomedres.us/