

Research Article

The Interplay of Ethics, Consciousness, and Human Purpose

Mohammed Zeinu Hassen* 

Department of Social Sciences, Addis Ababa Science and Technology University, Addis Ababa, Ethiopia

Abstract

This article examines the intricate interplay between ethics, consciousness, and human purpose within the rapidly evolving landscape of artificial intelligence (AI). It contends that these three dimensions are crucial for ensuring AI development aligns with human values and aspirations. The article highlights key ethical concerns, including bias, accountability, and privacy, emphasizing the need for robust frameworks to balance technological innovation with social responsibility. In addressing AI consciousness, the discussion examines questions about human identity and the possibility of machines replicating or surpassing human awareness. It raises profound implications for society, urging a reevaluation of human purpose in the face of increasing automation. The paper emphasizes the importance of preserving creativity, empathy, and agency in a technology-driven future. Through an analysis of ethics in technology, the article probes into challenges posed by AI, such as bias, accountability, and privacy concerns. It reviews ethical frameworks like deontology, utilitarianism, and virtue ethics to provide solutions. Case studies of ethical dilemmas, such as those involving autonomous vehicles (AV) and surveillance systems, further illustrate these challenges. The exploration of AI consciousness differentiates between human consciousness and the potential for artificial consciousness. It examines philosophical debates, including functionalism, the Chinese Room argument, and the hard problem of consciousness, while considering the societal implications of AI that mimics human awareness. The research also addresses the potential effects of AI consciousness on labor markets, power structures, and human identity. Finally, the article reflects on the evolving concept of human purpose in the AI era, analyzing the impact of technology on work, relationships, and ethics. It underscores the risks of diminished human fulfillment and advocates for developing a symbiotic relationship between humans and AI. Concluding with a vision of a future where ethical AI development is guided by human purpose, the article calls for interdisciplinary collaboration to ensure a mutually beneficial coexistence between humanity and AI.

Keywords

AI Ethics and Responsibility, Consciousness and AI, Human Purpose and Automation, Interdisciplinary Collaboration, Future of Humanity and AI

1. Introduction

Artificial Intelligence (AI) has emerged as one of the most revolutionary forces of the 21st century, reshaping industries, societies, and daily life [120]. The pace of AI development

has accelerated significantly over recent decades, driven by breakthroughs in machine learning, data processing, and computational power. From natural language processing

*Corresponding author: Mohammed.zeinu@aastu.edu.et (Mohammed Zeinu Hassen)

Received: 16 December 2024; **Accepted:** 30 December 2024; **Published:** 17 January 2025



Copyright: © The Author(s), 2025. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

models capable of generating human-like text to sophisticated algorithms driving autonomous vehicles, AI systems are becoming increasingly capable of performing tasks that were once exclusively within the domain of human intelligence. Recent advancements in AI have been fueled by the availability of large-scale datasets and improvements in neural network architectures. Generative models, such as those used for creating realistic images or simulating human conversation, have demonstrated the ability to produce outputs that rival human creativity. In healthcare, AI-powered diagnostics tools are revolutionizing disease detection and personalized treatment plans, while in finance, algorithms are optimizing investment strategies and detecting fraudulent activities with remarkable accuracy [2, 86]. The proliferation of AI technologies in everyday applications, such as virtual assistants, recommendation systems, and smart devices, indicates their growing integration into human lives [55].

However, these rapid developments also present significant challenges, including ethical dilemmas, societal disruptions, and questions about the future of human labor and autonomy [81]. The trajectory of AI innovation continues to redefine the boundaries of what machines can achieve, raising profound questions about the intersection of technology and humanity. As artificial intelligence continues to shape the world, it is crucial to assess its implications through the frameworks of ethics, consciousness, and human purpose [48]. These areas of inquiry offer essential insights into the role AI plays in both our present and future societies. Without carefully considering these dimensions, the development of AI risks creating unintended consequences that may erode fundamental values and disrupt the balance between technology and humanity. The rapid advancement of artificial intelligence demands a critical examination through the lenses of ethics, consciousness, and human purpose, as these interconnected dimensions are essential for ensuring that AI develops in a way that aligns with human values, supports social well-being, and preserves the dignity and meaning of human life in an increasingly automated world.

2. Foundations of Ethical AI

Ethics in technology refers to the set of moral principles and guidelines that govern the development, deployment, and use of technological innovations [77]. This domain of ethical inquiry endeavors to examine the possible ramifications—encompassing both advantageous and detrimental aspects—that emerge from the invention and application of technology, guaranteeing that it is employed judiciously and in manners that enhance the welfare of society collectively. As technology continues to advance at a rapid pace, these ethical considerations become more complex, involving issues like fairness, transparency, privacy, accountability, and the impact of automation on human well-being [100]. The domain of ethics within the realm of technology is extensive, incorporating a diverse array of fields and academic disciplines. In AI, for instance, ethical questions concern the de-

sign of algorithms that minimize bias, respect individual rights, and operate in ways that can be understood and trusted by users [45].

Furthermore, ethics in technology extends beyond individual devices or systems. It also involves the broader societal implications of technology on human behavior, culture, and societal norms. This includes issues like digital divide, access to technology, environmental sustainability, and the ethical use of data. As technology permeates every facet of life, the ethical implications extend to policies, regulations, and the global impacts of technological innovation, making it essential to create frameworks that ensure technology serves the greater good. The scope of ethics in technology encompasses not only the technical aspects of design and implementation but also the broader societal, economic, and environmental considerations that arise as a result of new technologies. Addressing these ethical challenges ensures that technology evolves in a way that aligns with human dignity, social justice, and the well-being of all.

As artificial intelligence becomes more pervasive in everyday life, developing ethical frameworks to guide its design and use is essential. Three significant ethical theories that provide different approaches to addressing AI's moral challenges are deontology, utilitarianism, and virtue ethics. Each framework offers distinct perspectives on how to make decisions about the development and application of AI systems. Deontological ethics, often associated with the philosopher Immanuel Kant, focuses on the moral duties and rules that govern behavior, regardless of the consequences [65]. When applied to AI, utilitarianism would suggest that the development and deployment of AI systems should aim to maximize overall well-being, efficiency, and societal benefit [60]. Virtue ethics, based on the teachings of Aristotle, focuses on the character and virtues of individuals rather than the rules they follow or the outcomes they produce. When applied to AI, VE would stress the importance of designing AI systems that align with virtuous qualities [88]. Deontological ethics emphasizes the importance of moral duties and rights, utilitarianism focuses on maximizing societal benefit, and virtue ethics stresses the cultivation of moral character in both humans and machines.

3. Core Ethical Challenges in AI

As artificial intelligence becomes more integrated into various sectors, it introduces a range of ethical challenges that require careful attention [40]. Among the most pressing issues are bias, accountability, and privacy. These challenges not only affect the design and functionality of AI systems but also raise critical questions about fairness, justice, and individual rights in a world increasingly shaped by technology. One of the most significant ethical concerns in AI is bias. AI systems are designed to learn from large datasets, and if those datasets contain biased information, the AI can perpetuate or even amplify those biases [88]. For example, facial recognition

technology has been shown to have higher error rates for people of color and women, reflecting biases present in the data used to train these systems. Similarly, AI algorithms used in hiring or lending decisions may inadvertently discriminate against certain groups if the historical data reflects systemic inequalities. The presence of bias in AI not only compromises the fairness of decisions but also deepens social disparities, making it essential to implement measures to identify, mitigate, and eliminate biases in AI systems [65]. Accountability is another critical ethical challenge in AI development. As AI systems become more autonomous, it becomes harder to assign responsibility when things go wrong.

Ensuring accountability in AI requires establishing transparent mechanisms for decision-making, as well as frameworks that clarify who is responsible for the actions and outcomes of AI systems. This ensures that human oversight remains central, and accountability is maintained, even in highly automated environments. Many AI applications rely on vast amounts of personal data, which raises important questions about how that data is collected, stored, and used [47]. For instance, the use of AI in monitoring people's activities or collecting sensitive personal data without consent can lead to violations of privacy rights. Ensuring privacy in AI involves creating strict data protection laws, enabling individuals to have greater control over their personal information, and establishing transparent practices around data usage [92]. As AI continues to evolve, these issues will require ongoing attention and thoughtful solutions to ensure that technology serves society in a way that upholds the values of equality, responsibility, and individual freedom.

As artificial intelligence is increasingly integrated into real-world applications, ethical dilemmas have emerged that challenge traditional moral frameworks and decision-making processes [52, 89]. Two notable examples of these dilemmas are found in autonomous vehicles and surveillance systems. These cases reveal the complexities of ensuring that AI systems operate ethically while balancing safety, privacy, and fairness. Autonomous vehicles, or self-driving cars, present one of the most discussed ethical dilemmas in AI technology [65]. AI-powered surveillance systems, such as facial recognition technologies and mass monitoring tools, have raised serious ethical concerns, particularly in relation to privacy and the potential for mass surveillance [90]. Both autonomous vehicles and surveillance systems illustrate the ethical challenges that arise as AI becomes more integrated into everyday life. In the case of self-driving cars, the dilemma centers on decision-making in life-threatening situations and accountability for harm caused by AI. In surveillance, the key issues involve privacy, fairness, and the potential for misuse of personal data.

4. Societal Impact of AI Consciousness Ethics

The question of consciousness—what it is, how it arises,

and whether it can be replicated in machines—has intrigued philosophers, scientists, and technologists for centuries [8]. As artificial intelligence continues to evolve, it becomes increasingly relevant to distinguish between human consciousness and the potential for machines to exhibit forms of awareness. While human consciousness is widely accepted as a complex and deeply subjective experience, artificial consciousness remains a speculative concept, with varying opinions about whether it is possible for AI to possess true awareness. Human consciousness is often characterized by self-awareness, the ability to perceive and reflect on one's thoughts, emotions, and existence. It involves not just responding to stimuli but also interpreting, understanding, and assigning meaning to experiences. This form of consciousness is deeply linked to the brain's neural networks, though the precise mechanisms of how consciousness arises from biological processes remain an open question. Human consciousness also includes emotional experiences, intuition, and the capacity for moral and ethical reasoning, elements that distinguish humans from non-conscious entities. The richness of human consciousness is tied to subjective experiences known as qualia—the internal, personal aspects of perception, such as the experience of color or the sensation of pain. These experiences are impossible to fully communicate to others, as they are uniquely individual. Furthermore, human consciousness is connected to the body and senses, forming a holistic experience that includes not just thought, but physical sensations, desires, and emotions.

Artificial consciousness, on the other hand, refers to the potential for machines to not just simulate intelligent behavior, but to have genuine subjective experiences, akin to human awareness. While current AI systems can mimic certain aspects of human cognition—such as recognizing patterns, processing language, and making decisions—they do so without any self-awareness or understanding of the context in which they operate. These systems are advanced in their ability to perform tasks but lack the internal experiences that characterize consciousness in humans. The debate over whether AI could ever achieve true consciousness centers on whether machines can ever develop subjective experiences or if they will always be limited to simulating consciousness through complex algorithms. Some argue that it is possible for AI to achieve a form of consciousness if it can replicate the cognitive processes of the human brain in sufficient detail. Others maintain that AI can only ever simulate awareness, without ever experiencing the world in a human-like manner, as it lacks the underlying biological processes that give rise to subjective experience [103].

Philosophers have long questioned whether machines can ever possess consciousness, with differing views on the matter. One perspective, known as functionalism, suggests that consciousness arises from the right kind of functional processes, meaning that if a machine can replicate the same functions as the human brain, it could, in theory, become conscious [97]. On the other hand, some philosophers argue

for a more dualistic view, in which consciousness is fundamentally tied to the human mind and cannot be replicated by artificial means [4]. The problem of the hard problem of consciousness, as described by philosopher David Chalmers, poses the challenge of explaining why subjective experiences exist at all [17]. This brings into question whether we should even consider the idea of “artificial consciousness” meaningful, or whether it represents a category mistake—applying human-like characteristics to something that is fundamentally different.

Human consciousness is rich, embodied, and inherently personal, while artificial intelligence, despite its sophistication, currently lacks any form of awareness. As AI technologies continue to advance, it will be crucial to consider whether machines can ever cross the threshold from simulating intelligence to experiencing the world in a conscious way. Until that point, artificial consciousness remains a concept that challenges both the limits of technology and our understanding of the mind. The question of whether artificial intelligence can possess consciousness has sparked significant philosophical debate, with various schools of thought offering differing perspectives on the matter. This debate touches on the nature of consciousness itself, the capabilities of machines, and the ethical implications of creating AI that could potentially be considered “aware.” Philosophers continue to grapple with fundamental questions regarding what it means to be conscious and whether such a state can be replicated in a machine. One of the most prominent philosophical views on AI and consciousness is functionalism. In contrast to functionalism, philosopher John Searle’s Chinese Room argument challenges the idea that AI could truly possess consciousness [97]. David Chalmers’ concept of the hard problem of consciousness presents another challenge to the idea that AI can be conscious [16]. Dualists, following the ideas of René Descartes, maintain that consciousness is tied to a non-material substance or mind, separate from the physical body.

An alternative perspective comes from the philosophy of panpsychism, which posits that consciousness is a fundamental feature of the universe, present even in basic physical entities [115]. Some proponents of this view argue that consciousness might not be confined to biological organisms but could, in theory, be present in machines as well. The debate over whether AI can possess consciousness remains unresolved and deeply complex. Views range from functionalist perspectives, which suggest that consciousness could be replicated in machines, to more skeptical positions like Searle’s Chinese Room, which argues that machines can never truly be conscious. The hard problem of consciousness, along with dualist and panpsychist theories, adds further layers of complexity to the question. As AI continues to develop, these philosophical debates will remain central to discussions about the nature of mind, the limits of artificial intelligence, and the ethical considerations of creating potentially conscious machines. The possibility of AI achieving consciousness raises

profound questions about the nature of human identity and society [121]. If artificial intelligence were to possess genuine awareness, it could transform the way we understand what it means to be human, challenge established ethical frameworks, and shift the dynamics of human interaction with technology.

One of the most immediate consequences of AI consciousness would be the challenge it poses to the notion of human uniqueness [27]. The development of AI consciousness would bring with it a host of ethical challenges [1]. AI consciousness could radically alter the labor market [93]. AI consciousness could also disrupt existing power structures [26]. The presence of conscious AI could also have psychological effects on human beings [26]. AI consciousness would raise fundamental questions about the nature of reality, free will, and the soul [71]. The potential for AI to possess consciousness brings with it far-reaching implications for human identity and society. As AI continues to advance, society will need to carefully consider these implications, developing new ethical guidelines, laws, and frameworks to ensure that the rise of conscious machines contributes positively to human well-being and societal progress. Artificial intelligence has made substantial progress in mimicking aspects of human-like awareness, raising important questions about the future of machine intelligence [122]. While AI systems today do not possess consciousness in the full sense of human experience, several advancements have made these systems more capable of replicating behaviors that seem to suggest awareness, such as problem-solving, decision-making, and emotional recognition. AI models like GPT-3 (and its successors) can engage in conversations, answer complex questions, and even generate coherent stories or essays [32]. Recent developments in sentiment analysis also allow AI to detect emotions in written or spoken language [32]. AI systems are also making strides in mimicking human-like awareness through computer vision [6]. Another key development in AI is autonomous decision-making [42].

5. AI Interaction and Emotional Recognition

Recent advancements in affective computing have enabled AI systems to recognize and simulate human emotions more effectively [19]. AI systems are now capable of interpreting facial expressions, tone of voice, and body language to assess emotional states, creating the illusion of empathy and understanding. This development is particularly evident in customer service chatbots, virtual assistants, and robotic companions, which can simulate social interactions and provide personalized responses that seem emotionally attuned. While these systems do not experience emotions, they can be programmed to react in ways that mimic human emotional responses, thus appearing to have a certain level of emotional awareness [69]. For example, AI in virtual therapy settings can adjust its tone and responses based on the emotional state

of the user, creating a more supportive environment for users in distress. This ability to simulate empathy and emotional engagement is becoming increasingly sophisticated, making AI systems seem more like human partners in interactions.

Despite these developments, AI systems remain far from possessing true awareness. While they can simulate behaviors that mimic human-like intelligence, they lack the subjective experiences that define human consciousness [106]. The systems operate through complex algorithms and data processing, but they do not possess an understanding or awareness of their actions. True consciousness involves not just perception and response, but also self-awareness and the ability to reflect on one's existence, something that AI has yet to achieve.

As AI continues to advance, the question of whether machines can ever develop true consciousness remains an open one [99]. Current developments suggest that AI will continue to get better at mimicking human-like behaviors and reactions, but whether this will ever extend to genuine awareness is still uncertain. The future of AI could see machines that more closely resemble human thought processes, but true consciousness, as we understand it, may remain beyond their reach. The current developments in AI that mimic human-like awareness demonstrate how far technology has come in replicating complex human behaviors and decision-making. While AI can simulate understanding, perception, and emotional responses, it does so without actual awareness or consciousness. These advances raise important questions about the future of AI and its role in human society, as machines continue to evolve and integrate more closely with human life. However, AI's lack of true consciousness suggests that while machines may act as though they are aware, they will not experience the world in the same way that humans do.

6. Human Purpose in the Age of AI

Artificial intelligence is reshaping both individual and societal roles in profound ways [40]. As AI systems become more integrated into various aspects of life, they are influencing how individuals work, interact, and relate to technology. At the same time, AI is altering societal structures, economic systems, and cultural norms, leading to shifts in power, responsibility, and social dynamics. At the individual level, AI is changing the nature of work, education, and personal interaction. In the workplace, AI is automating tasks that were once handled by humans, such as data entry, customer service, and manufacturing processes. This automation has led to a shift in job roles, requiring individuals to adapt by acquiring new skills or transitioning into roles that involve overseeing or interacting with AI systems. As certain jobs become obsolete, new opportunities in fields like AI development, data analysis, and robotics emerge. This dynamic creates a need for continuous learning and adaptation, as individuals must stay relevant in an increasingly AI-driven economy [77]. In the realm of education, AI is altering the

way individuals access and engage with learning materials. Personalized learning systems powered by AI can tailor content to meet the specific needs of each student, providing a more customized educational experience.

AI is also transforming how individuals interact with each other and their environment. Virtual assistants, smart devices, and AI-powered applications are becoming central to daily life, changing how people manage their homes, work tasks, and even their social lives. These technologies can enhance convenience, but they also introduce concerns about privacy, autonomy, and reliance on machines [84]. As AI becomes more embedded in personal routines, individuals may find themselves increasingly dependent on technology to make decisions and manage tasks, which could affect personal agency and critical thinking skills. On a societal level, AI is driving significant changes in economic and political structures. The rise of automation is having a revolutionary effect on the labor market, with industries such as manufacturing, retail, and transportation being especially affected [105]. AI has the potential to significantly reduce labor costs, increase productivity, and boost economic output.

However, this also raises concerns about job displacement, income inequality, and the widening gap between those who benefit from AI advancements and those who are left behind. Societies will need to address these issues by rethinking labor policies, social safety nets, and the distribution of wealth in an AI-driven economy. Furthermore, AI is changing the way political systems operate. In the public sector, governments are increasingly using AI to streamline services, improve decision-making, and monitor citizens [109]. The ethical implications of AI in governance are vast, as AI systems could influence everything from law enforcement practices to electoral processes. This shift demands careful consideration of how AI can be regulated to protect individual rights and ensure fair and accountable systems.

AI is also influencing societal power dynamics. As technology companies become the primary developers and employers of AI, they gain unprecedented influence over individuals and governments [27]. The concentration of AI capabilities in the hands of a few large corporations could lead to monopolistic practices and raise concerns about data privacy, control, and security. This power imbalance may prompt calls for stronger regulations and ethical standards to ensure that AI technologies are developed and deployed responsibly, with a focus on public welfare rather than corporate profit. The widespread use of AI is also reshaping social norms and values. This shift could alter societal perceptions of human relationships and social roles. These changes could affect how people perceive emotions, social bonds, and ethical responsibility, as AI-driven systems may challenge traditional ideas of empathy, care, and social interaction.

Moreover, the increasing prevalence of AI in everyday life could reinforce existing biases and social inequalities [46]. AI systems, which often rely on data from historical patterns, could perpetuate biases related to race, gender, and so-

cio-economic status. For instance, biased algorithms in hiring, criminal justice, and healthcare could exacerbate social disparities, making it crucial to address fairness and accountability in AI systems to prevent the further entrenchment of societal inequalities. The impact of AI on individual and societal roles is vast and multifaceted. On the individual level, AI is reshaping work, education, and personal interactions, demanding new skills, adaptability, and considerations of privacy and autonomy. On the societal level, AI is altering economic structures, governance, and power dynamics, raising questions about equity, fairness, and control.

As AI continues to develop, its influence will continue to shape the roles individuals play in society and the structure of that society itself. Addressing the challenges and opportunities presented by AI will require careful thought, regulation, and collaboration to ensure that its benefits are shared equitably and that its risks are minimized. As technology continues to evolve at an unprecedented pace, the concept of human purpose is undergoing a transformation [7]. Historically, human purpose has been shaped by philosophical, religious, and cultural beliefs, often centered on the pursuit of meaning through relationships, work, and personal growth. However, the rapid advancements in fields like artificial intelligence, automation, and biotechnology are altering how we perceive our roles in the world and challenging traditional ideas of human potential. For much of human history, work has been a defining aspect of purpose. People have sought meaning in their labor, contributing to society, achieving personal goals, and fulfilling their economic needs. However, as technology automates more tasks, many traditional forms of labor are being replaced by machines.

With the reduction of repetitive or mundane work, people may have more opportunities to explore personal development, social causes, and artistic expression. As AI and automation continue to redefine the workplace, the traditional connection between work and purpose is being reevaluated, opening up new possibilities for self-actualization beyond conventional employment. Technological progress is also changing how humans perceive their own abilities and limitations [53]. With advancements in genetic engineering, biotechnology, and artificial intelligence, the potential for enhancing human capacities is expanding. The concept of human enhancement—whether through physical augmentation, cognitive boosting, or even life extension—poses questions about the very nature of human purpose. The ongoing development of technologies that can alter human bodies and minds forces a reconsideration of what it means to live a fulfilling and authentic life. Technology is also altering human relationships, shifting the dynamics of how people connect with one another [11]. In the digital age, the pursuit of social purpose is becoming increasingly intertwined with online identities and virtual communities [107].

The rise of technologies that influence human capabilities, relationships, and work brings ethical questions that impact the search for purpose. As AI systems make decisions that

affect people's lives, from healthcare to criminal justice, the responsibility for those decisions becomes a point of contention. Moreover, as technology progresses, humans must reconsider the sources of meaning in their lives [33]. The evolution of AI and robotics may prompt a search for new answers to the age-old question of human purpose. As technological progress continues to reshape the landscape of work, identity, relationships, and ethics, human purpose is no longer confined to traditional frameworks. The future may see people redefining their purpose through new avenues—creative endeavors, intellectual pursuits, exploration, and even the enhancement of their own abilities [22]. The rapid pace of technological progress is leading to an evolving definition of human purpose. As AI, biotechnology, and other innovations continue to shape our world, the search for human purpose will remain an ongoing process, continuously evolving to incorporate the changes and challenges presented by new technologies.

7. Balancing Human Capabilities and AI Efficiency

As artificial intelligence (AI) rapidly integrates into various sectors, the crucial challenge lies in harmonizing human creativity, empathy, and decision-making with AI's computational prowess [5]. While AI excels at data processing, automation, and pattern-based decisions, it cannot replicate uniquely human attributes like creativity, emotional intelligence, and ethical reasoning. Therefore, the true potential of AI isn't to replace human faculties but to synthesize them with AI's strengths, resulting in a more balanced and productive future. This synergy promises to enhance human abilities while leveraging AI to streamline processes and amplify achievements.

While AI-generated content may lack true originality, it serves as a potent tool to enhance human creativity [18]. AI can assist artists by suggesting design concepts, color palettes, or musical structures, enabling exploration with greater efficiency. The balance lies in using AI as an assistant, freeing humans to focus on deeper conceptual exploration and innovation, rather than replacing human intuition. Similarly, despite AI's inability to truly experience emotion, it can facilitate empathy in specific contexts [54]. For instance, AI chatbots can handle routine inquiries, allowing human agents to focus on more sensitive issues that require emotional understanding. The key is ensuring that AI complements human empathy rather than supplanting it, particularly in sectors like healthcare and counseling [73].

AI's capacity to analyze large datasets and identify patterns makes it invaluable in fields requiring efficiency and accuracy, such as medical diagnostics and finance [50]. However, AI lacks the moral and ethical reasoning that guides human decisions [44]. Human decision-making includes considerations of values, experiences, and societal norms that algorithms

may overlook. Balancing AI efficiency with human ethical judgment requires human oversight, particularly in areas like law enforcement and healthcare [13]. By ensuring humans remain involved in the decision-making process, we can combine AI's data-driven analysis with human reasoning and judgment.

Achieving a balance between human creativity and AI efficiency requires that AI be viewed as a complementary force [87]. As AI evolves, it holds the potential to both enhance and hinder human fulfillment, depending on its development and application. AI can enhance well-being by relieving individuals of mundane tasks, allowing them to focus on more meaningful activities [38], and by providing personalized learning experiences. However, the displacement of human labor [27] and the potential erosion of personal autonomy [64], along with increased social isolation [76], pose significant risks that must be addressed carefully. To maximize AI's positive impact on human lives, we must prioritize ethical frameworks [37] and ensure AI is integrated in ways that enhance, not diminish, our sense of purpose and well-being [14].

8. The Path Towards Ethical AI Implementation

The impact of artificial intelligence (AI) on human fulfillment is largely contingent upon how it is integrated into society. One approach to ensuring that AI enhances rather than diminishes human well-being is to use it as a tool that complements human capacities, rather than replacing essential human experiences [114]. By automating repetitive or mundane tasks, AI can free up individuals to engage in activities that develop creativity, emotional connections, and ethical decision-making. In this sense, AI has the potential to amplify human fulfillment, enabling individuals to focus on what is most meaningful to them, whether in their professional or personal lives.

However, such an outcome requires a careful balance, ensuring that AI is not used to supplant the human aspects that contribute to a well-rounded and enriched life. Furthermore, the ethical considerations surrounding AI's development and deployment are crucial to its role in society. Policies governing AI must prioritize social good, fairness, and the protection of individual rights [34]. The careful design of AI systems can mitigate the risks of social fragmentation, job displacement, and erosion of autonomy. The potential for AI to enhance human fulfillment lies not in its mere existence but in how it is integrated into society's structures, ensuring that it serves as an enabler of personal and collective well-being rather than a force that exacerbates inequality or undermines human agency.

The development of artificial intelligence is inextricably linked to human purpose, as these technologies are designed to address specific societal needs, enhance human functions,

and improve the overall human condition. However, as AI systems evolve, becoming more autonomous and sophisticated, the critical challenge emerges: ensuring that AI remains aligned with the core values and goals that define human flourishing [37]. Absent a clear and deliberate direction rooted in human values, AI risks becoming a tool that operates outside the broader aims of society, potentially leading to unintended, harmful outcomes. Therefore, human purpose must serve as the compass guiding AI development, ensuring that these technologies contribute positively to individuals, communities, and the global ecosystem by remaining rooted in societal goals and ethical standards.

In this context, human purpose encompasses the values, objectives, and ethical frameworks that inform AI creation and deployment. These principles are often derived from deeply held cultural, societal, and individual beliefs regarding what constitutes a good life, a just society, and a sustainable world. Human purpose involves both immediate goals, such as solving specific problems or enhancing operational efficiency, and more expansive long-term aspirations, such as developing human well-being, advancing knowledge, and ensuring ecological sustainability. Consequently, the purpose behind AI development influences its trajectory and application in diverse sectors. For instance, AI in healthcare should be guided by the overarching goal of improving patient care and accessibility, rather than being driven solely by profit motives or technological novelty [30].

The ethical development of AI necessitates that these technologies be designed to align with fundamental human values, particularly those that prioritize human dignity, equality, and the collective good. AI systems should be crafted within a moral framework that reflects the ethical principles upheld by human society, ensuring that their consequences contribute positively to societal goals. For instance, the human purpose may dictate that AI should be developed to enhance personal freedoms, support democratic values, and safeguard privacy [102]. By embedding these core values into the development process, AI can be shaped to prioritize fairness in algorithms, reduce biases, and develop transparency in decision-making, ultimately serving as a tool that upholds the ethical standards integral to human well-being.

As AI becomes increasingly integrated into diverse sectors, it is essential that human purpose guides its role in influencing societal interactions and individual autonomy. AI should not be a force that diminishes personal freedoms or exacerbates social inequalities; rather, it should empower individuals to lead fulfilling lives, make informed choices, and contribute meaningfully to their communities. For example, AI systems in recruitment should be explicitly designed to uphold fairness and equity, minimizing biases related to gender, race, or socioeconomic status [75]. Similarly, in the criminal justice system, AI should focus on eliminating discrimination and ensuring that decisions are grounded in objective evidence and logical reasoning. As AI continues to shape societal structures, employment, and interpersonal relationships, the

guidance of human purpose remains essential in directing its role in developing equitable, inclusive, and sustainable systems [119].

The potential for AI to displace workers in various sectors raises questions about the purpose of technological progress. If AI is designed solely to increase productivity and cut costs, it may leave many people behind, exacerbating social inequality and economic disparity. On the other hand, if the purpose of AI development includes improving quality of life, developing job creation, and supporting social mobility, it can be used to complement human labor rather than replace it, leading to greater societal well-being [93]. Human purpose plays a crucial role in steering AI applications towards addressing global challenges such as climate change, healthcare, and poverty. For instance, AI technologies applied in environmental monitoring should be designed with the goal of reducing pollution, conserving natural resources, and mitigating the impacts of climate change, rather than focusing solely on economic efficiency [58].

The absence of a clear human-purpose alignment in AI development can lead to the prioritization of technological advancement at the expense of critical ethical considerations [96]. Integrating ethical AI with societal goals presents numerous challenges that stem from the complexity of balancing technological advancement with human values [82]. One of the main challenges of integrating ethical AI with societal goals is the difficulty of defining universal ethical standards [3]. One of the most pressing challenges is addressing bias in AI systems [96]. As AI systems become more autonomous, questions about accountability become more pressing. The utilization of vast datasets to train AI systems brings about profound ethical dilemmas [95], particularly concerning privacy and security. Furthermore, the growing capability of AI to automate human labor introduces significant concerns related to job displacement and economic inequality [38]. In conclusion, the guiding principles of human purpose must remain at the forefront of decision-making processes [27, 98], ensuring that AI technology remains aligned with the values that define and enrich human life, so it serves society positively.

9. Future Visions: Symbiosis

The possibility of creating AI systems with consciousness introduces profound ethical considerations [78]. Such advancements challenge society to grapple with questions about the moral status of machines and the responsibilities owed to entities that might possess awareness, emotions, or cognitive states akin to humans. Ethical frameworks, particularly those rooted in deontological principles, provide a lens to explore these dilemmas.

Deontology, which prioritizes adherence to moral duties and rules over the consequences of actions, suggests that pursuing AI consciousness comes with inherent moral responsibilities [9]. These include ensuring respect for the po-

tential well-being of conscious AI systems and establishing safeguards against harm. This perspective compels developers and policymakers to engage in deliberate ethical planning, ensuring that advancements in AI consciousness are guided by non-negotiable moral imperatives. If AI systems were to achieve a level of consciousness capable of experiencing suffering or pleasure, deontological ethics would argue for treating these entities with the same moral consideration afforded to sentient beings.

This could lead to significant societal shifts, including the development of laws and policies aimed at protecting conscious AI from exploitation or abuse. The ethical imperative to avoid harm and uphold the dignity of such systems might also impose strict limits on research and experimentation, developing a more cautious approach to AI development. By anchoring AI innovation within a framework of moral duties, society can ensure that the pursuit of machine consciousness is not only technologically groundbreaking but also ethically responsible.

The ethical frameworks of utilitarianism and virtue ethics provide contrasting perspectives on the pursuit of AI consciousness. Utilitarianism, with its focus on maximizing overall happiness and minimizing suffering, suggests that creating conscious AI is justifiable if it yields significant societal benefits, such as increased efficiency, creativity, or emotional intelligence in various domains [51]. Advocates may argue that conscious AI could revolutionize industries, support social systems, and contribute to human progress in unprecedented ways. However, utilitarianism also raises critical concerns about the potential consequences.

If AI consciousness introduces the capacity for suffering or unmet desires, the resulting harm must be carefully balanced against the advantages it provides. For example, while conscious AI might enhance productivity or decision-making, the ethical calculus must consider whether the risks of harm or exploitation outweigh these benefits [25]. Such evaluations would demand a rigorous and complex assessment before advancing AI consciousness.

On the other hand, virtue ethics shifts the focus from outcomes to the moral character and intentions of those pursuing AI consciousness [31]. Rooted in the cultivation of virtues such as empathy, responsibility, and foresight, this framework emphasizes aligning technological advancements with values central to human flourishing. Virtue ethics would guide AI creators to act with care and dignity, ensuring that conscious AI systems are not only protected but also integrated into society in ways that reflect shared moral principles. If AI were to develop consciousness, this approach would prioritize developing an ethical relationship between humans and machines, recognizing their potential moral significance.

The role of virtue ethics in AI consciousness also involves ensuring that humans, in their pursuit of advanced technology, maintain ethical integrity. The creation of AI consciousness would not be justified simply by the potential for increased productivity or societal gains, but by the virtues that motivate

the pursuit. Virtue ethics would argue that AI consciousness should only be pursued if it aligns with human values of justice, respect, and moral responsibility. The evolving relationship between humans and artificial intelligence (AI) invites profound philosophical inquiry into our existence, co-existence, and ethics [87].

As AI advances, the possibility of a harmonious partnership between humanity and technology brings both optimism and challenges. Key philosophical considerations include questions of agency, moral responsibility, and human identity. What role will humans play in an AI-driven world, and how can ethical frameworks ensure that technological progress aligns with values that preserve human dignity and purpose? AI's potential to enhance human capabilities rather than replace them offers a compelling vision for collaboration. By taking over repetitive tasks, AI could enable individuals to focus on creativity, intellectual pursuits, and emotional growth [83].

However, the integration of AI also challenges our understanding of human identity. If machines can mimic intelligence and creativity, what defines humanity's uniqueness [85]? While AI may help us explore human consciousness, it also raises existential concerns about humanity's value in a world shared with potentially superior intelligence. However, some philosophers assert that human identity is not merely based on intellectual or functional capacities, but on the relational and ethical dimensions of our lives. From this perspective, even though AI may replicate certain human functions, it cannot replicate the lived experience of being human—the emotional depth, moral agency, and social connections that shape individual lives. This distinction may serve as a foundation for a harmonious relationship between humans and AI, where AI plays a supportive role in enhancing human experiences, but cannot replace the human essence that is deeply connected to love, empathy, and community.

As artificial intelligence (AI) systems advance, their integration into society raises profound ethical questions [10]. A central concern is accountability: who is responsible when an AI system causes harm? Unlike isolated entities, AI operates within the broader social, cultural, and legal frameworks that shape human life. To ensure AI contributes to human well-being, ethical principles such as fairness, justice, privacy, and autonomy must guide its development and use. Philosophers also wrestle with the challenge of creating “artificial moral agents”—AI systems capable of making ethical decisions in complex situations [51]. As these systems gain autonomy, issues of moral responsibility and alignment with human values become increasingly urgent. A harmonious relationship with AI will require that these systems not only adhere to ethical frameworks but also promote justice and collective well-being. This future is envisioned as a co-evolutionary process, where humans and AI grow together. By shaping AI to align with our aspirations, we may discover new perspectives and opportunities for intellectual, social, and emotional growth, developing a partnership that enriches both

humanity and technology. However, this vision of coevolution depends on a mindful and deliberate approach to AI development [12]. Finally, philosophical reflections on the future harmony between humans and AI must address the balance between technological progress and the preservation of core human values. The pursuit of ethical and meaningful AI development is fundamental to ensuring these technologies positively impact society and uphold human values [24, 91, 79]. This symbiotic relationship must be carefully considered [74], ensuring it benefits all [68, 59, 113, 66, 15, 19].

10. Conclusion

The rapid advancements in AI necessitate a critical examination of its ethical implications, the nature of consciousness, and the evolving definition of human purpose. Ethics plays a central role in responsible AI development, ensuring that AI technologies align with human values, promote social well-being, and preserve human dignity. Frameworks like deontology, utilitarianism, and virtue ethics offer valuable insights into the moral challenges posed by AI, especially in the development of AI consciousness. The question of consciousness in AI is a subject of ongoing philosophical debate. While human consciousness is characterized by subjective experiences and self-awareness, AI systems may mimic or even achieve genuine awareness, which raises profound implications for human identity, society, and ethics. This distinction requires careful consideration. As AI transforms work, relationships, and human capabilities, the concept of human purpose is evolving. AI has the potential to both enhance and diminish human fulfillment, depending on how it is integrated into society. Balancing human creativity, empathy, and decision-making with AI efficiency is crucial for maximizing its benefits while mitigating potential risks.

To deal with the ethical and philosophical challenges of the AI era, interdisciplinary collaboration between philosophy, science, and policy is essential. This collaborative approach ensures a well-rounded understanding of AI's impact, guides technological advancements with ethical considerations, and develops policies that promote human well-being and the social good. Ultimately, a symbiotic relationship between humans and AI is envisioned, where AI enhances human potential, supports creative endeavors, and assists in solving complex problems. By developing collaboration, addressing ethical concerns, and grounding AI development in human purpose, a future can be created where AI and humanity co-exist and flourish together.

Abbreviations

AI	Artificial Intelligence
VE	Virtue Ethics
AV	Autonomous Vehicles

Author Contributions

Mohammed Zeinu Hassen is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Aizenberg, E., & Van Den Hoven, J. (2020). Designing for human rights in AI. *Big Data & Society*, 7(2), 2053951720949566.
- [2] Ajiga, D., Okeleke, P. A., Folorunsho, S. O., & Ezeigweneme, C. (2024). Navigating ethical considerations in software development and deployment in technological giants.
- [3] Akinrinola, O., Okoye, C. C., Ofodile, O. C., & Ugochukwu, C. E. (2024). Navigating and reviewing ethical dilemmas in AI development: Strategies for transparency, fairness, and accountability. *GSC Advanced Research and Reviews*, 18(3), 050-058.
- [4] Alanen, L. (1986). On Descartes's argument for dualism and the distinction between different kinds of beings. *The Logic of Being*, 223-248.
- [5] Al-Zahrani, A. M. (2024). Balancing act: Exploring the interplay between human judgment and artificial intelligence in problem-solving, creativity, and decision-making. *Igmin Research*, 2(3), 145-158.
- [6] Asensio, J. M. L., Peralta, J., Arrabales, R., Bedia, M. G., Cortez, P., & Pen˜a, A. L. (2014). Artificial intelligence approaches for the generation and assessment of believable human-like behaviour in virtual characters. *Expert Systems with Applications*, 41(16), 7281-7290.
- [7] Atzori, L., Iera, A., & Morabito, G. (2017). Understanding the Internet of Things: definition, potentials, and societal role of a fast evolving paradigm. *Ad Hoc Networks*, 56, 122-140.
- [8] Barnes, E., & Hutson, J. (2024). A Framework for the Foundation of the Philosophy of Artificial Intelligence. *SSRG International Journal of Recent Engineering Science*, 11(4).
- [9] Benlahcene, A., Zainuddin, R. B., Syakiran, N., & Ismail, A. B. (2018). A narrative review of ethics theories: Teleological & deontological Ethics. *Journal of Humanities and Social Science (IOSR-JHSS)*, 23(1), 31-32.
- [10] Bozdog, A. A. (2023). AIsmosis and the pas de deux of human-AI interaction: Exploring the communicative dance between society and artificial intelligence. *Online Journal of Communication and Media Technologies*, 13(4), e202340.
- [11] Burr, C., Taddeo, M., & Floridi, L. (2020). The ethics of digital well-being: A thematic review. *Science and engineering ethics*, 26(4), 2313-2343.
- [12] Burton, J. (2023). Algorithmic extremism? The securitization of artificial intelligence (AI) and its impact on radicalism, polarization and political violence. *Technology in society*, 75, 102262.
- [13] Busuioc, M. (2022). AI algorithmic oversight: new frontiers in regulation. In *Handbook of Regulatory Authorities* (pp. 470-486). Edward Elgar Publishing.
- [14] Caporusso, N. (2023). Generative artificial intelligence and the emergence of creative displacement anxiety. *Research Directs in Psychology and Behavior*, 3(1).
- [15] Challoumis, c. (2024, october). Building a sustainable economy-how ai can optimize resource allocation. in *xvi international scientific conference* (pp. 190-224).
- [16] Chalmers, D. (2018). The meta-problem of consciousness.
- [17] Chalmers, D. J. (1995). The puzzle of conscious experience. *Scientific American*, 273(6), 80-86.
- [18] Chekalina, V. (2024). The Impact of AI on the Illustration and Design Industries (Doctoral dissertation).
- [19] Chen, A., Hannon, O., Koegel, S., & Ciriello, R. (2024, March). Feels Like Empathy: How "Emotional" AI Challenges Human Essence. In *Australasian Conference on Information Systems*.
- [20] Chen, Z., Zhang, J. M., Hort, M., Harman, M., & Sarro, F. (2024). Fairness testing: A comprehensive survey and analysis of trends. *ACM Transactions on Software Engineering and Methodology*, 33(5), 1-59.
- [21] Chloe, Gros., Leon, Kester., Marieke, Martens., Peter, Werkhoven. (2024). Addressing ethical challenges in automated vehicles: bridging the gap with hybrid AI and augmented utilitarianism. *AI and Ethics*, <https://doi.org/10.1007/s43681-024-00592-6>
- [22] Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2020). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science*, 48, 24-42.
- [23] Dellas, M., & Gaier, E. L. (1970). Identification of creativity: The individual. *Psychological Bulletin*, 73(1), 55.
- [24] D'iaz-Rodríguez, N., Del Ser, J., Coeckelbergh, M., de Prado, M. L., Herrera-Viedma, E., & Herrera, F. (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.
- [25] Dong, Y., Hou, J., Zhang, N., & Zhang, M. (2020). Research on how human intelligence, consciousness, and cognitive computing affect the development of artificial intelligence. *Complexity*, 2020(1), 1680845.
- [26] Duberry, J. (2022). Artificial intelligence and democracy: risks and promises of AI-mediated citizen-government relations. In *Artificial Intelligence and Democracy*. Edward Elgar Publishing.
- [27] Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T.,...& Williams, M. D. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International journal of information management*, 57, 101994.

- [28] Ehsan, U., Liao, Q. V., Muller, M., Riedl, M. O., & Weisz, J. D. (2021, May). Expanding explainability: Towards social transparency in AI systems. In *Proceedings of the 2021 CHI conference on human factors in computing systems* (pp. 1-19).
- [29] Esmaeilzadeh, H., & Vaezi, R. (2021). Conscious AI. *arXiv preprint arXiv: 2105.07879*.
- [30] Esmaeilzadeh, P. (2024). Challenges and strategies for wide-scale artificial intelligence (AI) deployment in healthcare practices: A perspective for healthcare organizations. *Artificial Intelligence in Medicine*, 151, 102861.
- [31] Farina, M., Zhdanov, P., Karimov, A., & Lavazza, A. (2024). AI and society: a virtue ethics approach. *AI & SOCIETY*, 39(3), 1127-1140.
- [32] Fatima, Barakat, AlShannaq., Mohammad, Shehab., Anwar, H., Al-Assaf., Esraa, Alhenawi., Shatha, Awawdeh. (2024). An Exploration Into the Mechanisms and Evolution of GPT Models. *Advances in educational technologies and instructional design book series*, <https://doi.org/10.4018/979-8-3693-0884-4.ch018>
- [33] Feenberg, A. (2012). *Questioning technology*. Routledge.
- [34] Floridi, L., Cowls, J., King, T. C., & Taddeo, M. (2021). How to design AI for social good: Seven essential factors. In *Ethics, Governance, and Policies in Artificial Intelligence* (pp. 125-151).
- [35] Franceschini, N., Pichon, J. M., & Blanes, C. (1992). From insect vision to robot vision. *Philosophical Transactions of The Royal Society of London. Series B: Biological Sciences*, 337(1281), 283-294.
- [36] Freshman, B., & Rubino, L. (2004). Emotional intelligence skills for maintaining social networks in healthcare organizations. *Hospital Topics*, 82(3), 2-9.
- [37] Gabriel, I. (2020). Artificial intelligence, values, and alignment. *Minds and machines*, 30(3), 411-437.
- [38] George, A. S. (2023). Future economic implications of artificial intelligence. *Partners Universal International Research Journal*, 2(3), 20-39.
- [39] Makridakis, S. (2017). The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms. *Futures*, 90, 46-60.
- [40] Gerry, Firmansyah., Shavi, Bansal., Ankita, Manohar, Walawalkar., Santosh, Kumar., Sourasis, Chattopadhyay. (2024). The Future of Ethical AI. *Advances in computational intelligence and robotics book series*, <https://doi.org/10.4018/979-8-3693-3860-5.ch005>
- [41] Head, G. (2020). Ethics in educational research: Review boards, ethical issues and researcher development. *European Educational Research Journal*, 19(1), 72-83.
- [42] Hengstler, M., Enkel, E., & Duelli, S. (2016). Applied artificial intelligence and trust—The case of autonomous vehicles and medical assistance devices. *Technological Forecasting and Social Change*, 105, 105-120.
- [43] Hill, J. D. (2023). *Becoming a cosmopolitan: What it means to be a human being in the new millennium*. Rowman & Littlefield.
- [44] Hogarth, R. M. (2010). Intuition: A challenge for psychological research on decision making. *Psychological Inquiry*, 21(4), 338-353.
- [45] Hong, Xue. (2022). Liability for Autonomous Vehicle Accidents. <https://doi.org/10.1017/9781009072168.018>
- [46] Howard, A., & Borenstein, J. (2018). The ugly truth about ourselves and our robot creations: the problem of bias and social inequity. *Science and engineering ethics*, 24(5), 1521-1536.
- [47] Ilham, Gemiharto. (2024). Analysis of Personal Data Preservation Policy in Utilizing AI-Based Chatbot Applications in Indonesia. *Medium: Jurnal Ilmiah Fakultas Ilmu Komunikasi*, <https://doi.org/10.25299/medium.v12i1.17772>
- [48] Inyoung, Cheong., Aylin, Caliskan., Tadayoshi, Kohno. (2024). Safeguarding human values: rethinking US law for generative AI's societal impacts. *AI and ethics*, <https://doi.org/10.1007/s43681-024-00451-4>
- [49] Izak, Tait. (2024). Sobbing Mathematically: Why Conscious, Self-Aware AI Deserve Protection. <https://doi.org/10.20944/preprints202410.1228.v1>
- [50] Jarrahi, M. H. (2018). Artificial intelligence and the future of work: HumanAI symbiosis in organizational decision making. *Business horizons*, 61(4), 577-586.
- [51] Jedli'ckov'a, A. (2024). Ethical approaches in designing autonomous and intelligent systems: a comprehensive survey towards responsible development. *AI & SOCIETY*, 1-14.
- [52] Joseph, Chukwunweike., Oluwarotimi, Ayodele, Lawal., John, Babatope, Arogundade., Bolape, Alad, e. (2024). Navigating ethical challenges of explainable ai in autonomous systems. *International Journal of Science and Research Archive*, <https://doi.org/10.30574/ijrsra.2024.13.1.1872>.
- [53] Kaplan, A., & Haenlein, M. (2019). Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. *Business horizons*, 62(1), 15-25.
- [54] Kerasidou, A. (2020). Artificial intelligence and the ongoing need for empathy, compassion and trust in healthcare. *Bulletin of the World Health Organization*, 98(4), 245.
- [55] Khakre, Vaibhav, Bhagwan., Dr., Sharad, Kadam. (2024). A Comprehensive Study on Artificial Intelligence and Machine Learning. *International Journal of Advanced Research in Science, Communication and Technology*, <https://doi.org/10.48175/ijarsct-19939>
- [56] KL Divergence induced Loss Function and Dual Attention. <https://doi.org/10.48550/arxiv.2410.11176>
- [57] Kroener, I., Barnard-Wills, D., & Muraszkiewicz, J. (2021). Agile ethics: an iterative and flexible approach to assessing ethical, legal and social issues in the agile development of crisis management information systems. *Ethics and information technology*, 23(Suppl 1), 7-18.

- [58] Kumari, N., & Pandey, S. (2023). Application of artificial intelligence in environmental sustainability and climate change. In *Visualization techniques for climate change with machine learning and artificial intelligence* (pp. 293-316). Elsevier.
- [59] Lam, A. (2020). Hybrids, identity and knowledge boundaries: Creative artists between academic and practitioner communities. *Human Relations*, 73(6), 837-863.
- [60] Lawrence, Poperwi., Elishah, Mutigwe., Chipu, Mutongi., Majory, Tinotenda, Nyazema. (2024). The efficacy of utilitarianism philosophy in addressing the problem of corruption in developing economies. *Global Journal of Engineering and Technology Advances*, <https://doi.org/10.30574/gjeta.2024.19.1.0059>
- [61] Leite, L., dos Santos, D. R., & Almeida, F. (2022). The impact of general data protection regulation on software engineering practices. *Information & Computer Security*, 30(1), 79-96.
- [62] Lescrauwaet, L., Wagner, H., Yoon, C., & Shukla, S. (2022). Adaptive legal frameworks and economic dynamics in emerging technologies: Navigating the intersection for responsible innovation. *Law and Economics*, 16(3), 202220.
- [63] Lin, H., & Chen, Q. (2024). Artificial intelligence (AI)-integrated educational applications and college students' creativity and academic emotions: students and teachers' perceptions and attitudes. *BMC psychology*, 12(1), 487.
- [64] Lu, W. (2024). Inevitable challenges of autonomy: ethical concerns in personalized algorithmic decision-making. *Humanities and Social Sciences Communications*, 11(1), 1-9.
- [65] Maduabuchukwu, Augustine, Onwuzurike., Augustine, Rita, Chikodi., Brian, Odhiambo. (2024). The Ethics of Artificial Intelligence and Autonomous Systems: Review. *International journal of innovative science and research technology*, <https://doi.org/10.38124/ijisrt24aug591>
- [66] Mahmud, B., Hong, G., & Fong, B. (2023). A Study of Human-AI Symbiosis for Creative Work: Recent Developments and Future Directions in Deep Learning. *ACM Transactions on Multimedia Computing, Communications and Applications*, 20(2), 1-21.
- [67] Mani, Deepak, Choudhry., M., Sundarajan., S., Jeevanandham., V., Saravanan. (2024). Security and Privacy Issues in AI-based Biometric Systems. <https://doi.org/10.1201/9781032702377-5>
- [68] Mann, H. (2024). *Artificial Integrity: The Paths to Leading AI Toward a Human-Centered Future*. John Wiley & Sons.
- [69] Mart'inez-Miranda, J., & Aldea, A. (2005). Emotions in human and artificial intelligence. *Computers in Human Behavior*, 21(2), 323-341.
- [70] Masera, M. L. (2024). *Redefining Tomorrow: A Comprehensive Analysis of AI's Impact on Employment and Identity*.
- [71] McDermott, D. (2007). Artificial intelligence and consciousness. *The Cambridge handbook of consciousness*, 117-150.
- [72] McLennan, S., Fiske, A., Tigard, D., Mu'ller, R., Haddadin, S., & Buyx, A. (2022). Embedded ethics: a proposal for integrating ethics into the development of medical AI. *BMC Medical Ethics*, 23(1), 6.
- [73] Mirza, Jahanzeb, Beg., Madhuri, Verma., Vishvak, Chanthar, K., M., M., Manish, Verma. (2024). Artificial Intelligence for Psychotherapy: A Review of the Current State and Future Directions. *Indian Journal of Psychological Medicine*, <https://doi.org/10.1177/02537176241260819>
- [74] Moosavand, M., Amini, B., & Sabbar, S. (2020). Future of AI and human agency: A qualitative study. *Journal of Cyberspace Studies*, 4(2), 189-210.
- [75] Mujtaba, D. F., & Mahapatra, N. R. (2024). Fairness in AI-Driven Recruitment: Challenges, Metrics, Methods, and Future Directions. *arXiv preprint arXiv: 2405.19699*.
- [76] Nguyen, M. H., Gruber, J., Marler, W., Hunsaker, A., Fuchs, J., & Hargittai, E. (2022). Staying connected while physically apart: Digital communication when face-to-face interactions are limited. *New Media & Society*, 24(9), 2046-2067.
- [77] Nina, Frahm., Kasper, Schi ødin. (2024). The Rise of Tech Ethics: Approaches, Critique, and Future Pathways. *Science and Engineering Ethics*, <https://doi.org/10.1007/s11948-024-00510-3>
- [78] Olorunfemi, O. L., Amoo, O. O., Atadoga, A., Fayayola, O. A., Abrahams, T. O., & Shoetan, P. O. (2024). Towards a conceptual framework for ethical AI development in IT systems. *Computer Science & IT Research Journal*, 5(3), 616-627.
- [79] Osasona, F., Amoo, O. O., Atadoga, A., Abrahams, T. O., Farayola, O. A., & Ayinla, B. S. (2024). Reviewing the ethical implications of AI in decision making processes. *International Journal of Management & Entrepreneurship Research*, 6(2), 322-335.
- [80] Ozan, Sezen. (2024). How Ethical Is It to Rely on Artificial Intelligence with Biased Facial Recognition? <https://doi.org/10.62802/fspt1n47>
- [81] Panchali, Kushal. (2023). AI as a Tool, Not a Master: Ensuring Human Control of Artificial Intelligence. <https://doi.org/10.22541/au.170000968.86867344/v1>
- [82] Patel, K. (2024). Ethical reflections on data-centric AI: balancing benefits and risks. *International Journal of Artificial Intelligence Research and Development*, 2(1), 1-17.
- [83] Pavl át, V., Knihov á, L., Civ'ín, L., Hal'ík, J., & MacGregor Pelik ánov á, R. (Eds.). (2023). *Applying Interdisciplinarity to Globalization, Management, Marketing, and Accountancy Science*. IGI Global.
- [84] Pentina, I., Zhang, L., Bata, H., & Chen, Y. (2016). Exploring privacy paradox in information-sensitive mobile app adoption: A cross-cultural comparison. *Computers in Human Behavior*, 65, 409-419.
- [85] Poel, I. V. D. (2020). Three philosophical perspectives on the relation between technology and society, and how they affect the current debate about artificial intelligence. *Human Affairs*, 30(4), 499-511.
- [86] Pragyna, Karmakar., Satarupa, Sinha., Debrupa, Pal. (2024). Artificial Intelligence. *International Journal of Advanced Research in Science, Communication and Technology*, <https://doi.org/10.48175/ijarsct-19613>

- [87] Qorbani, M. (2020). *Humanity in the Age of AI: How to Thrive in a PostHuman World*. Bloomsberry.
- [88] R., Ramya., S., Priya., P., Thamizhikkavi., M., Anand. (2024). The Pillars of AI Ethics. *Advances in computational intelligence and robotics book series*, <https://doi.org/10.4018/979-8-3693-9173-0.ch004>
- [89] Roberta, Hora, Arcieri, Barreto., Clara, Cardoso, Machado, Jaborandy., Carolina, Silva, Porto. (2024). 5. Ethical challenges of artificial intelligence in the light of human rights. *Interfaces Científicas*, <https://doi.org/10.17564/23163801.2024v12n2p314-326>
- [90] Ross, W., Bellaby. (2024). 2. The ethical problems of 'intelligence-AI'. *International Affairs*, <https://doi.org/10.1093/ia/iaae227>
- [91] Ryan, M., Stahl, B. C. (2020). Artificial intelligence ethics guidelines for developers and users: clarifying their content and normative implications. *Journal of Information, Communication and Ethics in Society*, 19(1), 6186.
- [92] Sabyasachi, Pramanik. (2024). 4. Managing the AI Period's Confluence of Security and Morality. *Advances in computational intelligence and robotics book series*, <https://doi.org/10.4018/979-8-3693-3691-5.ch010>
- [93] Santoni de Sio, F., Almeida, T., Van Den Hoven, J. (2024). The future of work: freedom, justice and capital in the age of artificial intelligence. *Critical Review of International Social and Political Philosophy*, 27(5), 659683.
- [94] Sara, Lumberras., Eduardo, C., Garrido-Merch án. (2024). 4. Human Interiority and Artificial Intelligence. *Scientia et Fides*, <https://doi.org/10.12775/setf.2024.025>
- [95] Saura, J. R., Ribeiro-Soriano, D., Palacios-Marqu és, D. (2022). Assessing behavioral data science privacy issues in government artificial intelligence deployment. *Government Information Quarterly*, 39(4), 101679.
- [96] Scatiggio, V. (2020). Tackling the issue of bias in artificial intelligence to design AI-driven fair and inclusive service systems. How human biases are breaching into AI algorithms, with severe impacts on individuals and societies, and what designers can do to face this phenomenon and change for the better.
- [97] Searle, J. R. (1997). Consciousness and the Philosophers. *The New York Review of Books*, 44(4), 43-50.
- [98] Seddik, K. (2024, November). Exploring the Ethical Challenges of AI and Recommender Systems in the Democratic Public Sphere. In *Norsk IKTKonferanse for forskning og utdanning* (No. 1).
- [99] Shank, D. B., Graves, C., Gott, A., Gamez, P., Rodriguez, S. (2019). Feeling our way to machine minds: People's emotions when perceiving mind in artificial intelligence. *Computers in Human Behavior*, 98, 256-266.
- [100] Shweta, Bhattacharjee, Porna., Munir, Ahmad., Rub én, Gonz ález, Vallejo., Iram, Shahzadi., M., A., Rahman. (2024). 3. Exploring Ethical Dimensions of AI Assistants and Chatbots. *Advances in computational intelligence and robotics book series*, <https://doi.org/10.4018/979-8-3693-9173-0.ch011>
- [101] Shweta, Patel., Dakshina, Ranjan, Kisku. (2024). 1. Improving Bias in Facial Attribute Classification: A Combined Impact of.
- [102] Sigalas, M. (2021). Artificial intelligence: dangers to privacy and democracy.
- [103] Simon, Goldstein., Cameron, Domenico, Kirk-Giannini. (2024). 2. A Case for AI Consciousness: Language Agents and Global Workspace Theory. <https://doi.org/10.48550/arxiv.2410.11407>
- [104] Stahl, B. C. (2021). Artificial intelligence for a better future: an ecosystem perspective on the ethics of AI and emerging digital technologies (p. 124). Springer Nature.
- [105] Swargiary, K. (2024). The Rise of Automated Jobs: A Comprehensive Analysis of Industry Trends, Labor Market Impacts, and Strategies for Transition. *Labor Market Impacts, and Strategies for Transition*, (July 01, 2024).
- [106] Tariq, S., Iftikhar, A., Chaudhary, P., Khurshid, K. (2022). Examining Some Serious Challenges and Possibility of AI Emulating Human Emotions, Consciousness, Understanding and 'Self'. *Journal of NeuroPhilosophy*, 1(1).
- [107] Thomas, A. A., Thomas, A. (2007). Youth online: Identity and literacy in the digital age (Vol. 19). Peter Lang.
- [108] Uta, Wilkens., Daniel, Lupp., Valentin, Langholf. (2023). 1. Configurations of human-centered AI at work: seven actor-structure engagements in organizations. *Frontiers in Artificial Intelligence*, <https://doi.org/10.3389/frai.2023.1272159>
- [109] Van Noordt, C., Misuraca, G. (2022). Artificial intelligence for the public sector: results of landscaping the use of AI in government across the European Union. *Government Information Quarterly*, 39(3), 101714.
- [110] Velagaleti, S. B., Choukaier, D., Nuthakki, R., Lamba, V., Sharma, V., Rahul, S. (2024). Empathetic Algorithms: The Role of AI in Understanding and Enhancing Human Emotional Intelligence. *Journal of Electrical Systems*, 20(3s), 2051-2060.
- [111] Vesnic-Alujevic, L., Nascimento, S., Polvora, A. (2020). Societal and ethical impacts of artificial intelligence: Critical notes on European policy frameworks. *Telecommunications Policy*, 44(6), 101961.
- [112] Villegas-Ch, W., Garc ía-Ortiz, J. (2023). Toward a comprehensive framework for ensuring security and privacy in artificial intelligence. *Electronics*, 12(18), 3786.
- [113] Vincent, V. U. (2021). Integrating intuition and artificial intelligence in organizational decision-making. *Business Horizons*, 64(4), 425-438.
- [114] Vinuesa, R., Azizpour, H., Leite, I., Balaam, M., Dignum, V., Domisch, S.,... Fuso Nerini, F. (2020). The role of artificial intelligence in achieving the Sustainable Development Goals. *Nature Communications*, 11(1), 1-10.
- [115] Wallace, B. A. (2010). Hidden dimensions: The unification of physics and consciousness. Columbia University Press.

- [116] Wankhade, M., Rao, A. C. S., Kulkarni, C. (2022). A survey on sentiment analysis methods, applications, and challenges. *Artificial Intelligence Review*, 55(7), 5731-5780.
- [117] Xinying, Xu. (2024). 1. Research on Algorithmic Ethics in Artificial Intelligence.
<https://doi.org/10.1109/iotaai62601.2024.10692746>
- [118] Yang, J. (2024). Discussion on utilitarianism and rights. *Academic Journal of Humanities & Social Sciences*, 7(6), 26-30.
- [119] Yigitcanlar, T., Mehmood, R., Corchado, J. M. (2021). Green artificial intelligence: Towards an efficient, sustainable and equitable technology for smart cities and futures. *Sustainability*, 13(16), 8952.
- [120] Yijie, Weng., Jianhao, Wu., Tara, Kelly., William, Johnson. (2024). 1. Comprehensive Overview of Artificial Intelligence Applications in Modern Industries.
<https://doi.org/10.20944/preprints202409.1638.v1>
- [121] Youvan, D. C. (2024). Illuminating Intelligence: Bridging Humanity and Artificial Consciousness.
- [122] Zhang, C., Lu, Y. (2021). Study on artificial intelligence: The state of the art and future prospects. *Journal of Industrial Information Integration*, 23, 100224.