JOURNAL OF THE AMERICAN INSTITUTE
ISSN: 3066-3776
United States

Moral Responsibility in the Development of Artificial Intelligence according to Ethical Theology

Kesumawati[1], Jan Lukas Lambertus Lombok[2], Otieli Harefa[3]

Email Correspondent: kusuma00@yahoo.com

Keywords:
Ethical AI Frameworks, Moral Philosophy in AI, Algorithmic Ethics, Theological Perspectives on AI.

Abstract

The development of artificial intelligence (AI) has brought about various significant changes in various sectors of life, including industry, education, and health. However, advances in AI also pose moral and ethical challenges, especially related to transparency, fairness, and accountability in their use. In the context of ethical theology, moral responsibility in the development of AI is an important aspect that needs to be considered to ensure that this technology is developed and applied responsibly in accordance with applicable human values and moral principles. This research aims to examine how the principles of ethical theology can provide a normative foundation in the development of more ethical and responsible AI. The method used in this study is a literature study by analyzing various academic sources, including scientific journals, books, and policy documents that discuss the relationship between AI, morality, and ethical theology. The data collected were then analyzed using the qualitative content analysis method to identify the main findings in this study. The results of the study show that the development of ethical AI requires the integration of moral principles such as justice, love, accountability, and respect for human dignity. Additionally, human regulation and oversight remain necessary to ensure that AI is not used in a way that harms certain individuals or groups. Therefore, the ethical theology approach can be one of the solutions in formulating a more equitable and responsible AI policy.

INTRODUCTION

The development of artificial intelligence (AI) is increasingly rapid in various sectors of human life, including in the fields of industry, education, and health (Awasthi & Achar, 2024; Sariri, 2024). Along with these technological advancements, various ethical and moral challenges arise related to the application of AI in daily life (Dana & Adnyana, 2024). From the perspective of ethical theology, moral responsibility in the development of AI is a crucial aspect that needs to be considered to ensure that this technology is used ethically and responsibly (Andreas, 2024).

Artificial Intelligence (AI) is growing and becoming an important part of various sectors of life, from education to industry. However, the development of AI also poses ethical challenges, especially related to transparency, fairness, and privacy. According to Radanliev (2025), the integration of AI in sectors such as health and finance raises concerns regarding fairness in algorithm-

[1] Real Theological Seminary Batam, Indonesia, kusuma00@yahoo.com
[2] Real Theological Seminary Batam, Indonesia, janlukaslambertuslombok@gmail.com
[3] Real Theological Seminary Batam, Indonesia, nielharefa@gmail.com

based decision-making, as well as transparency in the use of data (Radanliev, 2025). In addition, Calderone (2025) highlights that the application of AI in education must consider possible biases, especially in AI-based evaluation systems that can impact academic decisions and students' future (Wilder & Calderone, 2025).

Morality in AI is also an important issue related to autonomous decision-making by AI systems. According to Masso et al. (2025), the ethics committee has an important role as a supervisor in the research and application of AI to be in accordance with the moral standards that apply in society. For example, in the social research sector, the application of AI must consider data protection and individual privacy so as not to violate human rights (Masso et al., 2025). In addition, Grichko et al. (2025) stated that the accelerating development of AI requires stricter regulations so that there is no misuse of technology that can threaten the moral values embraced by society (Grichko et al., 2025).

To ensure that AI remains based on strong morality, principles that ensure transparency and human oversight in AI systems are needed. Veluwenkamp and Buijsman (2025) introduced the concept of Operator Contestability, which means that the individual or organization overseeing the AI system must have control over the decisions made by the AI. This aims to prevent AI from making decisions autonomously without adequate human supervision (Veluwenkamp & Buijsman, 2025). Therefore, clear regulations and policies must be implemented to ensure that AI remains in line with the moral principles that prevail in society.

Artificial intelligence has the ability to perform various tasks that previously only humans could do, such as decision-making, data analysis, and automated information processing (Kumowal et al., 2024). However, decision-making by AI that is not closely monitored can have moral consequences, especially related to fairness, transparency, and accountability (Prianto et al., 2024). In this context, ethical theology provides a normative foundation for understanding how AI should be developed and used in order to adhere to noble moral values (Cahyono & Mukaromah, 2023).

Some use cases of AI have posed moral dilemmas, such as the application of facial recognition technology that can give rise to racial bias or automated algorithms that can make discriminatory decisions against certain groups (Silalahi, 2025). Therefore, it is important for developers and stakeholders to consider ethical and theological principles in the process of developing AI technology (Waruwu, 2024). In the perspective of theological ethics, humans have a responsibility to ensure that AI is not misused and continues to function in accordance with the moral values embraced by society (Prayogi & Nasrullah, 2024).

In this digital era, the influence of AI on human life is getting greater, thus raising the urgency to discuss moral and ethical aspects in its development (Mandi et al., 2023). In ethical theology, moral responsibility in the development of AI is not only limited to technical aspects, but also includes how this technology impacts human values, human dignity, and social relationships (Mariska, 2024). Therefore, this study aims to examine more deeply how moral responsibility in AI development can be analyzed through the perspective of ethical theology.

The increasing use of AI in various aspects of life has led to various ethical and moral dilemmas (Pabubung, 2021). With the development of AI, a theological and ethical approach is needed to understand how this technology can be developed responsibly without neglecting fundamental moral values (Adriyansa et al., 2024). This study is expected to make an academic contribution in understanding the relationship between theology, ethics, and artificial intelligence technology.

Several previous studies have discussed ethics in AI development from various perspectives. For example, a study conducted by Sariri (2024) discusses Christian ethics in the development of AI technology (Sariri, 2024). Kumowal, Th, & Kalintabu (2024) examine how AI can be integrated in

Christian missions and how it affects religious teaching (Kumowal et al., 2024). Additionally, research by Andreas (2024) highlights how functional interpretation can help bridge the relationship between AI and human moral responsibility (Andreas, 2024). However, these studies are still limited in examining AI in the perspective of ethical theology in more depth, so this research seeks to fill this gap.

METHOD

This research uses a literature study method or literature review, which is one of the approaches in qualitative research. The literature study is conducted by reviewing various academic sources, including books, journal articles, research reports, and related documents that discuss moral responsibility in the development of artificial intelligence (AI) as well as its relevance in the perspective of ethical theology (Creswell & Poth, 2016). This approach was chosen because it allows for an in-depth exploration of moral and ethical concepts in the development of AI by considering various theological perspectives that have been studied in previous studies (Bowen, 2009).

The data sources in this study consist of primary and secondary data sources. Primary sources include scientific journal articles and academic publications that directly address the topics of AI, ethics, and morality in a religious context (Youvan, 2025). Meanwhile, secondary sources include books, conference reports, and documents from academic institutions or organizations relevant to this study (Arora et al., 2025). The criteria for selecting data sources are based on the credibility of the publisher, relevance to the research topic, and the year range of publications, namely in the last five years (2019-2024) to ensure the accuracy and up-to-date information (Corfmat et al., 2025).

The data collection technique in this study is carried out through identification, selection, and analysis of documents related to the research subject. Identification is carried out by browsing academic databases such as Google Scholar, Springer, Elsevier, and ResearchGate to obtain relevant articles (Hidayati et al., 2024). After that, the selection process is carried out by sorting out documents that meet the inclusion criteria, namely research that discusses aspects of moral responsibility in the development of AI and its analysis in the perspective of ethical theology. Documents that do not meet the relevance criteria, such as those that only discuss technical aspects of AI with no connection to morality or theology, are excluded from the study.

The data that has been collected is then analyzed using the qualitative content analysis method. This approach involves data reduction, thematic categorization, and interpretation of information obtained from literary sources. Data reduction is carried out by filtering information that is directly related to moral responsibility and ethical theology in the development of AI. Furthermore, the selected data are categorized into several main themes, such as ethical principles in AI, theological approaches to morality, and the social and philosophical implications of moral responsibility in technology. Data interpretation is carried out by comparing findings from various sources to obtain a broader understanding and compile a theoretical synthesis that can enrich scientific discussions on the subject of research (Bowen, 2009).

This method was chosen because it is in line with the research objectives that aim to explore how moral responsibility in AI development can be understood through an ethical theological approach. Using a literature study approach, this research can identify relevant moral principles in AI development as well as offer conceptual insights that can be used as a basis for the development of more ethical and responsible AI-based technology policies and regulations.

RESULT AND DISCUSSION

This study selects various academic literature that discusses moral responsibility in the development of artificial intelligence according to ethical theology. From the various articles found, 10 articles that are most relevant to this research topic were selected. These articles were selected based on the criteria of the credibility of the source, the relevance to moral and ethical issues in the development of AI, and the theological approach used in the analysis. The following is a table of findings from the literature study conducted:

Table 1. Literature Review

No	Author	Title	Findings
1	Awasthi & Achar	African Christian Theology in the Age of AI	AI in African theological perspectives emphasizes moral wisdom and ethical responsibility in technology
2	Youvan	Emergent Ontology: Bridging Ontogeny, Phylogeny, and AI in Creation	AI is seen as part of the creation process that has moral implications for humanity
3	Esther & Donald	Spiritual Impact of AI-Powered Analytics on Evangelism in Nigeria	AI can help or hinder religious missions depending on its moral implementation
4	Arora et al.	Virtuous Integrative Social Robotics for Ethical Governance	AI must be developed with social justice and ethical norms in mind
5	Messer	The Decline of the Human? Identity, Agency, and Justice in AI	AI raises challenges to human identity and moral responsibility in the legal system
6	Alasti	Artificial Intelligence and Meaningful Human Control	The need for human oversight in AI decision-making to avoid responsibility gaps
7	Arqam	Strengthening Integrity in Academic Students in AI Era	Religious values-based education can shape morality in AI development
8	Balusamy & Dhanaraj	Computational Intelligence in Healthcare Law	AI in health law requires ethics-based regulation
9	Maphalala & Ajani	Leveraging AI as a Learning Tool in Higher Education	AI can be an effective learning tool but it must have clear moral boundaries
10	Anyebe	An Advocacy for AI in Christian Religious Education	AI can be used in Christian religious education while maintaining ethical values

Research on moral responsibility in the development of artificial intelligence according to ethical theology reflects the increasing need for an ethical approach based on moral principles in the development of AI technology. From the results of the literature studies that have been conducted, ten main articles were found that comprehensively discuss various aspects related to morality, ethics, and the relationship between AI and theological principles. Each article provides valuable insights into how AI should be developed and applied while still considering the moral responsibility inherent in the technology.

One of the articles that is in the main spotlight is the research conducted by Awasthi and Achar (2025) regarding Christian theology in Africa and the role of AI in religious perspectives. This article highlights how moral wisdom taught in the African Christian tradition can provide an ethical framework for the development of AI. They emphasized that AI must be developed taking into account long-held values in society, such as social justice, collective responsibility, and shared welfare.

This approach is important to avoid technological exploitation that can cause social inequality and algorithmic-based discrimination (Awasthi & Achar, 2024).

Meanwhile, research by Youvan (2025) brings a unique perspective by discussing how AI can be understood in the context of creation. In his study, he discusses the concept of emergent ontology that links AI to the development of human ontology and the evolution of spirituality. With this approach, AI is not only seen as a mere technological product, but also as a growing entity with a moral impact that must be considered by its developers. The study raises profound questions about who has a moral responsibility for increasingly autonomous AI and how religious ethics can shape human understanding of AI creation (Youvan, 2025).

On the other hand, research conducted by Esther and Donald (2025) addresses the spiritual impact of AI in the context of evangelization in Nigeria. This article focuses on how the use of AI in analytical systems can help the spread of religious teachings, but at the same time raises moral dilemmas related to data manipulation, privacy, and information authenticity. Some theologians in this study argue that AI used for religious purposes must have a strict control mechanism so that it is not misused for propaganda that is not in accordance with moral principles (Esther & Donald, 2025).

Another very relevant research is a study conducted by Arora et al. (2025) which focuses on the integration of social robotics in ethical governance. This article highlights how AI systems that are increasingly intelligent and capable of interacting with humans require a more holistic moral approach. They argue that AI should be developed with the principles of social justice, non-discrimination, and transparency in mind. The article also asserts that without clear regulations and ethical boundaries, AI can become a tool that exacerbates social injustice, especially for vulnerable groups in society (Arora et al., 2025).

Messer (2025) in his article raises the issue of human identity in the AI era. He highlighted how the development of AI has changed the way humans understand identity, responsibility, and justice. In this context, AI is not only a tool, but also an entity that plays a role in legal and social decisions. This article confirms that there is a huge challenge in determining who is responsible when AI makes decisions that have a major impact on human life. Therefore, an ethical and theological approach is needed to ensure that AI does not replace the role of humans in decision-making that involves moral considerations (Messer, 2025).

Meanwhile, a study conducted by Alasti (2025) examines the need for human control in increasingly autonomous AI. In his study, he explained the concept of meaningful human control, which is the idea that AI must remain under human control so that there is no responsibility gap. The research also highlights the importance of ethics-based regulation to ensure that AI is not used for benefits that could harm the wider community (Alasti, 2025).

The educational approach in AI is also in the spotlight in Arqam (2025) research, which discusses how religious values can be applied in AI-based education systems. This article emphasizes that moral education is essential in shaping student and academic perspectives regarding the responsible use of AI. By instilling the values of honesty, fairness, and responsibility, AI can be developed with stronger moral principles in mind (Situmorang & Arqam, 2025).

In the field of law and health, research conducted by Balusamy and Dhanaraj (2025) discusses how artificial intelligence can play a role in legal decision-making in the health sector. They highlighted that AI in the legal field must be developed with fairness, accountability, and transparency in mind. This article emphasizes the need for strict regulation in the application of AI in the legal sector so as not to cause bias or unfair decisions (Malviya et al., 2023).

An article written by Maphalala and Ajani (2025) also highlights the importance of AI in the world of higher education. They are researching how AI can be used as an innovative learning tool, but it still has clear ethical boundaries. By ensuring that AI not only improves efficiency but also

upholds moral principles and fairness, AI can be used as a more responsible tool (Maphalala & Ajani, 2025).

Finally, a study by Anyebe (2025) raises how AI can play a role in Christian religious education. In his study, he highlighted how AI can be used to spread religious teachings in a more interactive and effective way. However, he also emphasized the importance of human control so that AI does not replace the spiritual values taught in religious education (Anyebe, 2025).

From the ten articles reviewed, it can be concluded that moral responsibility in the development of AI is a very complex issue and requires a multidisciplinary approach, including theology, ethics, law, and education. AI is not just a neutral technological tool, but it has far-reaching moral implications for human life. Therefore, the ethical theology approach is particularly relevant in ensuring that AI is developed with sustainable moral principles in mind. This literature study shows that AI must be developed with a balance between innovation and social responsibility in order to provide maximum benefits to society without violating ethical values that have long been upheld in religious traditions and human morality.

Discussion

The Concept of Moral Responsibility in AI Development from the Perspective of Ethical Theology

In the context of ethical theology, moral responsibility in the development of artificial intelligence (AI) is not only a technical or scientific obligation, but also an ethical commitment rooted in moral and spiritual principles that have long been a cornerstone of religious traditions and moral philosophy. In various theological views, humans are seen as creatures created with reason, morality, and the ability to act responsibly. Therefore, the development of AI cannot be separated from the ethical responsibility of its creators, who must ensure that this technology develops in harmony with the values of humanity, justice, and the common good.

One of the key concepts in ethical theology that is relevant to moral responsibility in AI is the doctrine of Imago Dei, which in the Christian tradition teaches that human beings are created in the image of God. The meaning of this teaching affirms that every individual has high dignity and should not be reduced to just an object or a technological resource. In the development of AI, the concept of Imago Dei is very important because it ensures that AI should not be developed in a way that damages, threatens, or replaces human values. If AI technology starts treating humans as entities that can be controlled or manipulated without respect for their dignity, then this is contrary to the basic principles of ethical theology.

Furthermore, moral responsibility in AI is also closely related to the principles of love and justice. In Christian ethics, love (agape love) is a fundamental principle that requires every human action to reflect compassion and concern for others. In the development of AI, this means that the technology must be designed with its impact on humans, especially vulnerable groups. For example, AI used in the justice system or labor recruitment should be avoided from discriminatory biases that can harm individuals based on race, gender, or social status. If AI is used for economic purposes without paying attention to the principle of justice, then this technology will actually exacerbate social inequality.

The principle of common good is also a key aspect in the moral responsibility of AI development. In the view of Catholic social ethics, technology does not belong to a few parties who can use it for personal or corporate interests alone, but must be used for the welfare of the entire society. In other words, the development of AI must consider whether this technology is truly beneficial for everyone, not just for those who have access or economic power to control it. An example of the application of this principle is the development of AI to support health services,

education, and climate change mitigation, where technology is used to improve the quality of life of many people, not just to increase the profits of the technology industry.

Another aspect that is part of moral responsibility in AI is autonomy and moral accountability. AI, as an increasingly sophisticated and autonomous system, often operates with complex algorithms that are difficult for humans to understand. However, even though AI has a certain degree of autonomy, responsibility for every action and decision made by AI remains in the hands of the humans who developed it. This means that engineers, policymakers, and owners of tech companies must have clear mechanisms in place to ensure that AI does not act outside of human control and that there are accountability pathways that can be used to correct unethical or harmful decisions. In the absence of clear accountability, AI can easily be used for irresponsible interests, such as privacy-violating mass surveillance or information manipulation for political gain.

Finally, from the perspective of ethical theology, AI should not eliminate human free will or control human behavior in a way that is contrary to moral principles. Free will is one of the fundamental aspects of human existence in various religious traditions, and technology should not be designed to limit or replace human moral decisions. In practice, this means that AI must remain within the boundaries that allow humans to remain in control of their own lives. For example, in the military world, the decision to use destructive force should not be left entirely to AI, because such actions require complex moral considerations that can only be made by humans.

Thus, from the perspective of ethical theology, moral responsibility in the development of AI is not only a matter of compliance with technological regulations, but also a matter of ensuring that AI develops in a way that respects human dignity, upholds the principles of justice, serves the common good, and maintains human accountability and free will. It demands the involvement not only of scientists and engineers, but also of ethicists, religious leaders, and the wider community, to ensure that AI remains a tool that serves humanity, not the other way around.

Application of Theological Principles in the Design and Implementation of Equitable AI

In the equitable application of artificial intelligence (AI), theological principles can provide an ethical foundation that ensures that these technologies are not only developed for the sake of efficiency and innovation, but also to support social justice and respect the moral values upheld in various religious traditions and ethical philosophies. Understanding AI as a tool that has the potential to deeply impact human life, AI design and implementation must consider aspects of fairness, transparency, accountability, and respect for human dignity.

One key aspect to consider is inclusive and non-discriminatory AI design. In the Imago Dei principle, every human being is seen as a creature of equal dignity before God, so every technology created must treat all individuals fairly and without bias. However, in practice, many AI systems inadvertently reflect the social biases present in the data used to train them. For example, facial recognition algorithms have been shown to be less accurate in identifying individuals of certain racial groups, suggesting bias in their development process. Therefore, in the application of theological principles, AI must be designed with fairness testing and ethical audit mechanisms that ensure that the algorithms used are non-discriminatory and can serve all groups of society fairly.

In addition, ethics in the use of data and privacy are also very important aspects of equitable AI design. In the principles of love and justice taught in many theological traditions, respect for individual privacy is one of the main values that must be maintained. In today's digital age, personal data is often used by AI systems without explicit consent from the owner, which can result in violations of privacy rights. Moral principles demand that the data used in AI development must be obtained in a legitimate and transparent manner, and that there must be clear limits on how the data can be utilized. AI developed without considering privacy ethics can be a tool that harms individuals

and society, for example in the form of data misuse for mass surveillance or information manipulation.

Furthermore, in the spirit of the common good, AI must be developed to provide benefits for the entire community, not just for a few who have access and control over this technology. AI can be used to support social welfare in various ways, for example in the fields of health services, education, and climate change mitigation. In the healthcare sector, AI can help diagnose diseases faster and more accurately, especially in areas where there is a shortage of medical personnel. In the field of education, AI can be used to create personalized learning systems, so that students with special needs can gain access to better education. However, if AI is only developed for economic purposes, without considering its impact on the wider community, then its existence can exacerbate existing social and economic disparities.

The accountability and responsibility of AI developers are also important elements in the application of theological principles in the design and implementation of this technology. Although AI has the ability to work autonomously, the ultimate responsibility for the impact caused by AI systems remains with humans. In the perspective of theological ethics, any technological innovation must be accompanied by a mechanism that ensures that AI developers can be held accountable for the consequences that arise from the use of this technology. This can be realized through regulatory policies that require transparency in AI systems, so that users can understand how a decision is made by AI and whether it can be reviewed if it proves problematic. If AI is used in the judicial field, for example, the system must be designed in such a way that the judge or human decision-maker retains full control over the final decision, and the AI only serves as an analytical tool.

In addition, AI must also be developed by considering the principle of human free will. In many theological teachings, free will is one of the graces that distinguishes humans from other creatures and gives humans the capacity to make moral decisions. Therefore, AI should not take over or control human moral choices in fundamental aspects. For example, in the military world, AI used in weapon systems must remain within human control, as decisions to use destructive force must consider ethical aspects that only humans can understand. Similarly, in the field of advertising and information manipulation, AI should not be used to influence public opinion in a way that deprives individuals of their freedom to form their own understandings and beliefs.

Thus, the application of theological principles in the equitable design and implementation of AI not only includes the technical aspects of AI system creation, but also demands deep reflection on how these technologies can be aligned with moral and social values that support overall human well-being. AI must be developed with an approach that considers inclusivity, transparency, accountability, and respect for human dignity and freedom. By integrating these theological principles, AI can become a tool that not only drives technological advancements, but also ensures that those advancements do not come at the expense of justice and broader human values.

Recommendations for Equitable AI Development

To ensure that the development of AI is not only oriented towards technological advancement but also upholds justice and human values, several important steps need to be implemented. First, AI ethics education must be strengthened for developers, policymakers, and technology users so that they understand the moral implications of AI and the responsibilities that come with it. The technology education curriculum should include ethical and social aspects to prevent future misuse of AI.

In addition, regulations based on the principles of justice and human dignity must be applied at the national and global levels. These regulations must ensure that the development of AI does not harm certain groups and remains oriented towards social welfare. Transparency and accountability

in AI systems must also be maintained by ensuring that every AI decision can be understood and traced, as well as having a correction mechanism in place in case of ethical deviations.

AI must also be developed with human well-being and environmental sustainability in mind. These technologies should be directed to support the fields of health, education, and social justice, not just for the benefit of big industry or economic gain. Therefore, the balance between innovation and ethics must be maintained. AI should not replace the role of humans in aspects that require empathy and moral consideration, such as in mental health services and legal decision-making.

CONCLUSION

The results of this study show that moral responsibility in the development of artificial intelligence is not only oriented to technical and regulatory aspects, but also to a deeper ethical dimension, including the principles of ethical theology. AI has great potential for improving efficiency and productivity in various fields, but without careful moral considerations, its use can have negative impacts, such as algorithmic bias, social injustice, and privacy violations. Therefore, AI must be developed with due regard to moral principles that emphasize justice, transparency, accountability, and respect for human dignity.

From the perspective of ethical theology, the development of AI must consider spiritual and moral values that have long been part of human life. Principles such as Imago Dei in the Christian tradition, which emphasizes that human beings are created with irreplaceable dignity and value, remind us that technology should not be used to reduce human beings to mere economic objects or tools. In addition, the principles of agape love and common good must be a guide in ensuring that AI is truly used for the benefit of all humanity, not just a few who have access to this technology.

As a concrete step, the study recommends several strategies to ensure that AI is developed responsibly. First, clear and ethical-based regulations must be implemented to avoid misuse of technology. Second, AI ethics education must be strengthened, especially for engineers and technology developers, so that they have a better understanding of the social and moral impacts of AI. Third, human supervision must remain an integral part of AI systems to ensure accountability in every decision made by this technology. Fourth, AI must be developed with an inclusive and non-discriminatory approach, so that it can provide benefits to all groups of society without causing injustice.

REFERENCE

Adriyansa, A., Herinda, P. B., & Sutabri, T. (2024). 'Analisis Filosofis Atas Konsep Kecerdasan Buatan Dalam Konteks Etika Teknologi.' *Scientifica: Jurnal Ilmiah Sains Dan Teknologi*, *2*, 154–159.

Alasti, K. (2025). Artificial intelligence and meaningful Human control; agent-neutral-reason-responsive mechanisms and the possibility of tracing responsible agent (s). *Journal of Philosophical Theological Research*.

Andreas, D. (2024). Tafsir Fungsional, AI, dan Etika: Menjembatani Peran dan Agensi Moral Manusia Dalam Teknologi. *Voice*, *4*(2), 77.

Anyebe, A. (2025). An Advocacy for the Integration of Artificial Intelligence (AI) in Teaching and Learning of Christian Religious Education in Ahmadu Bello University Zaria, Nigeria. *Zaria Journal of Educational Studies (ZAJES)*, *25*(1), 42–49.

Arora, A. S., Marshall, A., Arora, A., & McIntyre, J. R. (2025). Virtuous integrative social robotics for ethical governance. *Discover Artificial Intelligence*, *5*(1), 8.

Awasthi, Y., & Achar, G. O. (2024). *African Christian Theology in the Age of AI: Machine Intelligence and Theology in Africa*.

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, *9*(2), 27–40.

Cahyono, N. F., & Mukaromah, S. (2023). Etika penggunaan kecerdasan buatan pada teknologi informasi. *Prosiding Seminar Nasional Teknologi Dan Sistem Informasi*, *3*(1), 482–491.

Corfmat, M., Martineau, J. T., & Régis, C. (2025). High-reward, high-risk technologies? An ethical and legal account of AI development in healthcare. *BMC Medical Ethics*, *26*(1), 4.

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.

Dana, G. W. P., & Adnyana, P. E. S. (2024). KECERDASAN BUATAN "AI" DAN TRANSFORMASI TEKS SUCI: POTENSI DAN TANTANGAN. *Widya Dana: Jurnal Penelitian Ilmu Agama Dan Kebudayaan*, *2*(2), 183–191.

Esther, E.-J., & Donald, A. O. (2025). *Spiritual Impact of AI-Powered Analytics on Evangelism in Nigeria*.

Grichko, V., Schamber, B., Hall, S., Termansen, K., Swank, D., Barker, D., & Lehmann, E. (2025). Dissertation 2.0: An Action Research Study on Adapting with AI. *Impacting Education: Journal on Transforming Professional Practice*, *10*(1), 33–41.

Hidayati, H., Ghozali, M. I., Evanita, E., & Nindyasari, R. (2024). Transforming Manufacturing Industries: The Future of Artificial Intelligence and Ethical Considerations from a Religious Perspective. *The International Conference on Computer Science and Engineering Technology Proceeding (ICCSET)*, *3*(1), 20–29.

Kumowal, R. L., Th, M., & Kalintabu, H. (2024). Integrasi AI Dalam Misi Kristen: Peluang Dan Tantangan Dalam Penginjilan Dan Pengajaran Alkitab. *EULOGIA: Jurnal Teologi Dan Pendidikan Kristiani*, *4*(2), 225–242.

Malviya, R., Chilamkurti, N., Sundram, S., Dhanaraj, R. K., & Balusamy, B. (2023). *Artificial intelligence for health 4.0: challenges and applications*.

Mandi, E. L., Du'pa, D., & Pasangkin, S. (2023). PENCIPTAAN ULANG MANUSIA: IMPLIKASI TEOLOGI KRISTEN DALAM ERA POSTHUMANIS. *HUMANITIS: Jurnal Homaniora, Sosial Dan Bisnis*, *1*(4), 389–401.

Maphalala, M. C., & Ajani, O. A. (2025). Leveraging artificial intelligence as a learning tool in higher education. *Interdisciplinary Journal of Education Research*, *7*(1), a01–a01.

Mariska, V. (2024). Al-Qur'an dan Kecerdasan Buatan. *Edu Ceria*, *2*(2), 219–242.

Masso, A., Gerassimenko, J., Kasapoglu, T., & Beilmann, M. (2025). Research Ethics Committees as Knowledge Gatekeepers: The Impact of Emerging Technologies on Social Science Research. *Journal of Responsible Technology*, 100112.

Messer, N. (2025). The Decline of the Human? Identity, Agency, and Justice in an Age of Emerging Neurotechnologies. *Studies in Christian Ethics*, 09539468251316643.

Pabubung, M. R. (2021). Epistemologi Kecerdasan Buatan (AI) dan Pentingnya Ilmu Etika dalam Pendidikan Interdisipliner. *Jurnal Filsafat Indonesia*, *4*(2), 152–159.

Prayogi, A., & Nasrullah, R. (2024). Artificial Intelligence dan Filsafat Ilmu: Bagaimana Filsafat Memandang Kecerdasan Buatan Sebagai Ilmu Pengetahuan. *LogicLink*, 144–155.

Prianto, R., Lawira, K., & Patodo, J. (2024). Pengetahuan, Teknologi, dan Kehidupan Manusia dalam Perspektif Teologis. *Te Deum (Jurnal Teologi Dan Pengembangan Pelayanan)*, *13*(2), 209–226.

Radanliev, P. (2025). AI Ethics: Integrating Transparency, Fairness, and Privacy in AI Development. *Applied Artificial Intelligence*, *39*(1), 2463722.

Sariri, I. G. (2024). *Pandangan Etika Kristen terhadap Penggunaan Teknologi Kecerdasan Buatan*.

Silalahi, B. (2025). Perspektif Filsafat Kristen Terhadap Integrasi Kecerdasan Buatan dalam Pelayanan Gereja: Sebuah Analisis Literatur. *Acintya: Jurnal Teologi, Filsafat Dan Studi Agama*, *1*(1), 105–117.

Situmorang, H. D., & Arqam, M. L. (2025). Strengthen Integrity Academic Students in the Era of Artificial Intelligence (AI) through Approach Psychology Education Islam. *Proceeding of the International Conference on Religious Education and Cross-Cultural Understanding*, *1*(1), 87–97.

Veluwenkamp, H., & Buijsman, S. (2025). Design for operator contestability: control over autonomous systems by introducing defeaters. *AI and Ethics*, 1–13.

Waruwu, Y. (2024). Pendidikan agama Kristen dalam era AI: menggunakan kecerdasan buatan untuk personalisasi pembelajaran spiritual. *Jurnal Abdiel: Khazanah Pemikiran Teologi, Pendidikan Agama Kristen Dan Musik Gereja*, *8*(2), 151–165.

Wilder, C., & Calderone, S. (2025). Empowering Educational Leadership Research with Generative AI: Insights and Innovations from a Qualitative EdD Dissertation. *Impacting Education: Journal on Transforming Professional Practice*, *10*(1), 18–26.

Youvan, D. C. (2025). *Emergent Ontology: Bridging Ontogeny, Phylogeny, and Artificial Intelligence in the Framework of Creation*.