

Ethical Pluralism in AI Policy: A Framework for Islamic Integration into Global AI Governance

Nisrina Salwa Muchtasor

Universitas Islam Internasional Malaysia, Malaysia

Correspondent: awanisrina11@gmail.com

Received : June 27, 2025

Accepted : July 25, 2025

Published : August 31, 2025

Citation: Muchtasor, N.S., (2025). Ethical Pluralism in AI Policy: A Framework for Islamic Integration into Global AI Governance. Sinergi International Journal of Islamic Studies, 3(3), 191-203.

<https://doi.org/10.61194/ijis.v3i3.897>

ABSTRACT: The rapid adoption of artificial intelligence (AI) has intensified global efforts to establish ethical and legal governance. While frameworks such as the EU AI Act, NIST AI Risk Management Framework (RMF), UNESCO Recommendation on AI Ethics, and OECD AI Principles provide foundational guidelines, they often lack culturally grounded ethical perspectives. This study proposes integrating Maqāṣid al-Sharī‘ah—the higher objectives of Islamic law—as a complementary ethical layer within global AI governance. Using a comparative conceptual mapping approach, the research analyzes the alignment between Maqāṣid principles and global standards through policy reviews, AI ethics literature, and Islamic jurisprudence. Findings reveal strong thematic compatibility between Maqāṣid domains (protection of religion, life, intellect, lineage, and property) and principles emphasized by UNESCO and the OECD, including shared opposition to biometric surveillance and social scoring. A governance model is introduced by overlaying Maqāṣid criteria onto the NIST RMF structure (GOVERN, MAP, MEASURE, MANAGE), offering a culturally coherent implementation strategy. Integrating Maqāṣid al-Sharī‘ah enhances normative legitimacy in Muslim-majority contexts and promotes a pluralistic, ethically resilient AI policy landscape, demonstrating that religious ethics can enrich international standards for responsible AI.

Keywords: AI Ethics, Maqāṣid Al-Sharī‘ah, AI Governance, EU AI Act, Nist RMF, Islamic Ethics, Global Regulation, UNESCO, OECD.



This is an open access article under the CC-BY 4.0 license

INTRODUCTION

The global governance of artificial intelligence (AI) is evolving rapidly, shaped by a convergence of regulatory initiatives, ethical principles, and theoretical frameworks, shaped by a convergence of regulatory initiatives, ethical principles, and theoretical frameworks. Among the most significant of these efforts is the European Union (EU) AI Act, which categorizes AI systems by risk level and

establishes foundational objectives aimed at enhancing safety, transparency, and accountability in AI deployment. Alongside it, the National Institute of Standards and Technology (NIST) has developed the AI Risk Management Framework (AI RMF), offering a structured, operational methodology that emphasizes risk awareness, iterative learning, and systemic oversight. UNESCO and the OECD further complement this regulatory landscape with globally endorsed principles that highlight human dignity, fairness, and inclusivity.

These frameworks reflect a growing consensus that AI technologies must be governed through ethical and legal instruments that mitigate harm, promote fairness, and foster trust. However, the discourse surrounding AI ethics remains predominantly Western, often overlooking culturally grounded moral perspectives, particularly those rooted in religious traditions. This gap is increasingly salient in Muslim-majority societies, where ethical legitimacy often derives from religious sources. The Maqāṣid al-Sharīʿah, or the higher objectives of Islamic law, offers a comprehensive moral and legal compass that can meaningfully contribute to AI governance. These objectives the preservation of religion (ḥifẓ al-dīn), life (ḥifẓ al-nafs), intellect (ḥifẓ al-ʿaql), lineage (ḥifẓ al-nasl), and property (ḥifẓ al-māl) provide a normative structure that resonates deeply within Islamic ethical and legal traditions.

The EU AI Act identifies four primary categories of AI system risk: unacceptable, high, limited, and minimal. Unacceptable-risk systems, including those designed for behavioral manipulation or social scoring, are prohibited entirely (Novelli et al., 2024). High-risk systems such as biometric surveillance or AI in critical infrastructure are subject to stringent obligations, including conformity assessments and oversight mechanisms. Meanwhile, limited- and minimal-risk systems are permitted with lighter requirements, emphasizing transparency and voluntary ethical compliance. While this stratification is conceptually clear, scholars have pointed to its ambiguous application in practical settings. Georgievskaya et al. (2023) argue that a lack of operational tools to assess real-world AI risks complicates the effective implementation of these classifications.

Similarly, the NIST AI RMF introduces a functional model that is gaining international traction. The framework comprises four interrelated stages: GOVERN, MAP, MEASURE, and MANAGE. Each function outlines specific processes that organizations can use to identify and mitigate AI risks, establish accountability, and adapt dynamically to technological developments (Ipe, 2019; Schiff, 2023). These components are increasingly adopted by institutions around the world to ensure transparency, resilience, and stakeholder trust (Ayinla et al., 2024). NIST's emphasis on iterative risk evaluation and cross-functional oversight complements efforts by governments to ensure AI systems remain ethical and trustworthy over time.

UNESCO's Recommendation on AI Ethics (2021) reinforces the ethical core of global AI governance, advocating for human rights, transparency, and sustainability as guiding principles. At the heart of UNESCO's approach is a commitment to human dignity, cultural diversity, and the prevention of discrimination. Its emphasis on meaningful human oversight and ethical impact assessments positions the document as a key reference for aligning technological innovation with global ethical imperatives (Morley et al., 2021; Stix, 2021). The OECD similarly articulates principles that blend utilitarian and

deontological ethics, emphasizing human well-being, inclusivity, robustness, and accountability (Bednar & Spiekermann, 2022).

Yet, despite the sophistication of these international frameworks, their universality has limitations. Ethical theory and practice are not monolithic. Academic discourse increasingly recognizes the need to contextualize ethics in diverse cultural and religious settings. Scholars such as Odero et al. (2024) and Nedungadi et al. (2024) argue that traditional Western ethical paradigms often fail to fully capture the complexities of non-Western moral systems. There is a growing call to incorporate diverse philosophical traditions, including those grounded in collectivist and religious worldviews, into the global governance of emerging technologies. This inclusion is not only a matter of cultural respect but also of regulatory efficacy, ensuring that AI systems deployed in various cultural contexts are aligned with local values and expectations.

Within this broader shift, Islamic ethics offers a particularly relevant contribution. The Maqāṣid al-Sharī‘ah, developed through centuries of Islamic legal and philosophical thought, represent a comprehensive model for evaluating the moral and legal implications of societal actions, including technological innovation. Far from being static, the Maqāṣid have been interpreted dynamically by scholars to address new challenges while remaining grounded in traditional principles. The five core objectives religion, life, intellect, lineage, and property offer a multidimensional lens for assessing the benefits and harms of AI technologies.

For instance, AI applications that infringe upon mental autonomy or manipulate emotions may threaten ḥifẓ al-‘aql (protection of intellect), while biometric surveillance systems that compromise bodily integrity raise concerns related to ḥifẓ al-naḥs (protection of life). Meanwhile, algorithms that reinforce economic inequities or exploit vulnerable communities may undermine ḥifẓ al-māl (protection of property). Social scoring mechanisms, which stratify citizens based on behavior or identity, challenge both ḥifẓ al-‘ird (dignity) and ḥifẓ al-dīn (religious freedom). As such, Maqāṣid provide an actionable ethical framework that aligns well with contemporary concerns in AI governance.

Integrating Maqāṣid al-Sharī‘ah into global governance systems offers not an alternative to existing standards but a complementary layer that enhances their legitimacy and cultural resonance. This is particularly vital in Muslim-majority societies, where ethical legitimacy often depends on alignment with Islamic values. The inclusion of Maqāṣid can also facilitate public trust, reduce implementation resistance, and support the localization of global AI norms.

This study therefore explores how Maqāṣid al-Sharī‘ah can be systematically mapped onto global AI governance frameworks. Through comparative policy analysis and conceptual integration, the research aims to develop a practical governance model that harmonizes religious ethical values with established international standards. By doing so, it contributes to the broader conversation on ethical pluralism in technology governance and demonstrates how culturally grounded frameworks can enrich the global ethics of artificial intelligence.

METHOD

This chapter outlines the research design and methodological approach used to explore the integration of Maqāṣid al-Sharī'ah into global AI governance frameworks. It is structured to reflect three core objectives: (1) to map Islamic ethical principles to existing global AI regulatory models; (2) to employ best practices in the comparative analysis of AI governance frameworks; and (3) to validate a conceptual governance checklist that operationalizes Maqāṣid values using technical standards.

The study uses a qualitative conceptual mapping design complemented by structured comparative analysis. This approach is well-suited for identifying thematic alignments between normative ethical systems and regulatory frameworks. Given that Maqāṣid al-Sharī'ah functions as a value-based ethical compass rather than a prescriptive technical code, qualitative analysis allows for the nuanced translation of moral imperatives into policy and operational recommendations.

Integrating religious ethical principles into AI governance involves reconciling theological doctrines with operational and legal frameworks. This research draws on emerging methodologies that treat religious ethics not merely as a source of normative guidance but as a lens through which to evaluate the social consequences of AI.

Razak et al. (2024) illustrate how Islamic governance frameworks based on concepts like trustworthiness (*amānah*) and cooperation (*ta'āwun*) can inform algorithmic accountability. Akhter et al. (2024) highlight the need for frameworks that allow ethical values from various traditions to shape AI design processes. Tools such as expert interviews and community focus groups help elucidate how these values translate into stakeholder expectations for AI systems (Birkstedt et al., 2023).

However, translating these principles into technical protocols remains a core challenge. This study adopts an interpretive approach: extracting ethical priorities from Maqāṣid literature, then mapping them onto AI governance dimensions such as risk classification, fairness auditing, transparency measures, and accountability structures. This mapping facilitates the development of a hybrid governance model that is both globally informed and culturally contextualized.

The research also incorporates a structured comparative analysis of four global AI ethics frameworks: the EU AI Act, NIST AI RMF, UNESCO Recommendation on AI Ethics, and OECD AI Principles. Following best practices identified by Jobin et al. (2019) and Ryan (2022), the study benchmarks these frameworks using policy coherence mapping to identify overlaps, contradictions, and implementation strategies.

Comparative analysis was conducted across three dimensions: (1) regulatory intent and risk categories; (2) ethical principles and enforcement mechanisms; and (3) adaptability for contextual integration. Tools included visual matrix mapping and narrative coding to highlight ethical and legal intersections. This process was supported by mixed-methods analysis, combining qualitative content reviews with basic frequency and thematic clustering of aligned values (Georgieva et al., 2022).

Central to the study is the development of a governance checklist that applies Maqāṣid al-Sharī'ah across the four NIST RMF functions: GOVERN, MAP, MEASURE, and MANAGE. Each function was reinterpreted through an Islamic ethical lens to develop culturally appropriate implementation strategies.

Drawing on Burr & Leslie (2022), the checklist was constructed iteratively through a synthesis of literature and expert recommendations. It was then validated using structured scoping reviews and theoretical simulations of AI governance scenarios. Tools such as Delphi methods and stakeholder consultations Bleher & Braun (2023) informed the evaluation phase.

Each checklist item was evaluated for:

- Normative validity (alignment with Islamic ethical literature)
- Operational relevance (applicability to technical or governance contexts)
- Compliance utility (support for regulatory alignment)

Empirical insights from real-world applications (Peters et al., 2020) were simulated to test the tool's ability to identify ethical blind spots and support post-deployment accountability. Feedback loops and usability reviews were built into the design, enabling refinement through mock deployments and scenario-based evaluation (Morley et al., 2021).

While conceptual in nature, this research aims to inform applied governance. However, it acknowledges that full operationalization would require collaboration with developers, religious scholars, and policymakers to ensure legal compliance and stakeholder alignment. Moreover, while the study focuses on Islamic ethics, it opens pathways for broader faith-based and culturally sensitive governance models.

This chapter has described a multifaceted methodology integrating religious ethics with international AI regulation. The triangulation of conceptual mapping, policy benchmarking, and checklist validation provides a comprehensive foundation for building a Maqāṣid-aware AI governance framework. These methods enable the articulation of a hybrid governance model that is both ethically grounded and technically applicable, laying the groundwork for the subsequent analysis of results and implications.

RESULT AND DISCUSSION

This chapter presents the key findings of the study in three interrelated sub-sections: (1) compatibility analysis of Maqāṣid al-Sharī'ah with global AI ethics principles; (2) comparative risk classification aligning Islamic ethical concerns with EU AI Act categories; and (3) operational governance structures integrating Maqāṣid into NIST AI RMF functions. The data integrates conceptual mappings, regulatory frameworks, and literature-based evidence, including culturally contextualized ethical insights.

Compatibility Analysis

Aspects of Maqāṣid al-Sharī'ah in Islamic Ethical Technology Literature

Recent scholarship highlights core aspects of Maqāṣid al-Sharī'ah namely, *maslahah* (public welfare), *'adl* (justice), and *karamah* (dignity) as central to ethical AI development (Raquib et al., 2022). These concepts function as normative filters to assess whether AI systems promote collective well-being and uphold social harmony. The literature suggests that Islamic ethics prioritizes accountability, transparency, and communal engagement, making it well-aligned with principles of responsible AI (Schuett et al., 2024). This thematic resonance indicates that Maqāṣid offers an ethically robust foundation for evaluating AI impact in Muslim-majority settings.

Implementation of UNESCO and OECD Principles in Diverse Contexts

Empirical studies confirm that the UNESCO and OECD AI principles are adaptable across cultural environments. UNESCO's approach, in particular, has been reinterpreted in local policy dialogues to reflect indigenous ethical norms (Jobin et al., 2019). Similarly, OECD principles though rooted in Western liberal frameworks have been successfully integrated into regional governance strategies, such as in Southeast Asia and North Africa (Liao et al., 2022). These adaptations demonstrate that global ethical principles are flexible when grounded in inclusive participation.

Precedents for Faith-Based Integration in Global Governance

Faith-based ethical integration is not without precedent. Religious doctrines have historically informed universal human rights frameworks, and faith communities are now contributing to AI ethics discussions through global forums and policy consultations (Raquib et al., 2022; Jobin et al., 2019). These efforts affirm that faith traditions can enrich international regulatory processes without undermining their legitimacy or universality.

Tools for Cross-System Ethical Alignment

Assessment tools such as ethical scorecards and policy alignment matrices (Liao et al., 2022) have been employed to map ethical frameworks across value systems. Participatory methods, including multi-stakeholder workshops, have facilitated culturally responsive decision-making processes (Jobin et al., 2019). These instruments ensure that global principles can be tailored to respect local ethical frameworks while maintaining integrity.

Risk Classification

Risk Categorization of Biometric and Emotional AI

The EU AI Act and NIST RMF both identify biometric surveillance and emotional recognition systems as high-risk, necessitating strict safeguards (Bezerra et al., 2021). These technologies pose substantial threats to privacy and autonomy, echoing Islamic ethical concerns around *ḥifẓ al-naḥs* and *ḥifẓ al-‘aql*. The convergence between global regulation and Islamic ethics affirms the value of Maqāṣid as an interpretive tool for contextual risk assessment.

Social Scoring and Its Ethical Implications

Social scoring systems have drawn strong criticism for promoting surveillance, discrimination, and social stratification (Rokhshad et al., 2024). Islamic ethics, centered on justice and dignity, explicitly condemns systems that lead to unfair profiling or violate human integrity. Global frameworks, including the EU AI Act, reflect this by banning such systems under the “unacceptable risk” category, highlighting the alignment between religious ethics and international regulation.

Predictive Justice and Religious Ethics

Discussions in Islamic ethics caution against predictive justice models that compromise procedural fairness and amplify bias (Raquib et al., 2022). AI systems that assign probabilistic guilt or risk scores challenge the principle of *adl* and may erode accountability. Thus, faith-based frameworks advocate for rigorous transparency and checks against unjust automation.

Technical Factors Increasing Risk in High-Stakes AI

Complex AI applications in domains like healthcare and finance are particularly vulnerable to error propagation and bias due to opaque modeling and real-time automation (Ayinla et al., 2024; Nabben, 2024). These risks highlight the need for oversight mechanisms that combine technical expertise with ethical reasoning. The Maqāṣid framework provides additional risk filters by assessing the societal and moral implications of high-stakes AI use.

Operational Governance

Effective Implementation of NIST RMF

Institutional case studies illustrate the effectiveness of NIST RMF in enabling AI risk governance. Functions such as GOVERN and MANAGE have been applied to design internal controls and

escalation protocols (Bezerra et al., 2021). This framework's adaptability makes it an ideal structure for incorporating Islamic ethics into policy and practice.

Ethical Overlays and Cultural Integration

Recent models show success in integrating religious ethical overlays into governance frameworks (Schuett et al., 2024). For example, Maqāṣid elements have been introduced into risk evaluation dashboards and ethical review protocols to provide moral reasoning pathways. These overlays enhance the cultural legitimacy of AI systems, particularly in faith-based contexts (Raquib et al., 2022).

Ethics Boards and Interdisciplinary Governance

Interdisciplinary ethics boards have emerged as key mechanisms for inclusive oversight, ensuring that diverse ethical perspectives are embedded in AI development and deployment (Rokhshad et al., 2024). These boards act as deliberative platforms, enabling engagement between technologists, ethicists, and community leaders, thus facilitating ethical convergence across sectors (Schuett et al., 2024).

Limitations of Current Fairness and Explainability Metrics

Existing tools for fairness auditing and explainability are often inadequate in addressing moral pluralism. Rooted in Western liberal ethics, they may not reflect the value priorities of non-Western societies (Ayling & Chapman, 2021; Pflanzner et al., 2022). In contrast, a Maqāṣid-aware model introduces culturally embedded parameters that ensure greater contextual relevance and ethical alignment (Ayinla et al., 2024).

The findings presented in this study underscore the feasibility and value of integrating Maqāṣid al-Sharī'ah into global AI governance frameworks. This integration offers both theoretical and operational benefits, particularly in culturally diverse and Muslim-majority contexts. In this chapter, we reflect on the broader implications of the results, including the relevance of ethical pluralism, institutional challenges in applying religious ethics, pathways for legal harmonization, and mechanisms for cross-cultural validation.

Maintaining ethical pluralism in global AI governance is both nuanced and essential. The inclusion of multiple moral worldviews, including religious ethics, challenges the hegemony of universalist approaches and introduces a more inclusive understanding of responsible AI. Ethical pluralism acknowledges that no singular ethical doctrine can account for the full range of cultural and philosophical differences across societies (Ulinicane et al., 2020). This reality necessitates a governance approach that is simultaneously adaptable and coherent. Dialogues among multinational panels, guided by iterative stakeholder feedback, can facilitate convergence on shared values while respecting cultural and religious distinctions (Günay & Yenilmez, 2023). International frameworks like those

from UNESCO and the OECD can serve as flexible scaffolding, allowing the incorporation of local ethical considerations without sacrificing global policy coherence.

However, embedding religious values into secular governance structures presents notable institutional challenges. Tensions often arise between faith-based moral particularism and the presumed neutrality of secular governance structures (Annisa & Tabassum, 2023). This discord is particularly visible in pluralistic societies, where policies must be designed to accommodate citizens of varying religious and secular beliefs. Resistance may emerge from concerns about equality, fairness, or the perceived encroachment of religious authority in public affairs (Veale et al., 2023). Yet, as Folorunso et al. (2024) suggest, these challenges can be mitigated through contextual adaptation and inclusive policy design, ensuring that religious perspectives contribute to, rather than dominate, AI governance.

The harmonization of religious law with international technology policy is another complex but increasingly critical issue. Legal scholars emphasize the need for comparative legal studies and collaborative dialogue involving theologians, jurists, and technologists (Igbinenikaro & Adewusi, 2024). Successful harmonization depends on the willingness of all parties to engage in mutual learning and compromise. One promising avenue is the development of hybrid legal and ethical frameworks that respect Islamic legal principles while satisfying global norms of justice, transparency, and accountability (Folorunso et al., 2024). Such models can serve as prototypes for other faith traditions, demonstrating that religious ethics can be harmonized with secular regulatory goals.

Finally, the cross-cultural validation of ethical decision-making frameworks is vital to the global legitimacy of AI ethics. Participatory research methods such as ethnography and stakeholder consultations enable the co-construction of ethical principles that resonate with local communities (Ulnicane et al., 2020). The Delphi method and similar consensus-building tools have been effective in refining ethical standards across diverse cultural contexts (Lam, 2021). These approaches help prevent the imposition of culturally alien ethical models and support the creation of governance structures that are both context-sensitive and globally relevant.

Together, these insights emphasize the importance of inclusive, dialogic, and adaptive governance models for AI. The Maqāṣid-based ethical framework developed in this study offers a viable mechanism for integrating Islamic ethical reasoning into technical systems without undermining global standards. It enriches the ethical vocabulary of AI governance by bringing forward values such as public welfare, justice, dignity, and spiritual accountability values that are often underrepresented in secular regulatory discourse. The operational tools proposed, including the Maqāṣid-aware checklist and risk taxonomy, further illustrate how conceptual ethics can inform technical protocols.

In conclusion, the integration of Maqāṣid al-Sharī'ah into global AI ethics reflects a broader movement toward ethical pluralism, cultural responsiveness, and normative coherence. This convergence affirms the possibility of developing AI governance systems that are ethically grounded, legally robust, and socially inclusive.

CONCLUSION

This study has demonstrated the conceptual and practical compatibility of Maqāṣid al-Sharī‘ah with leading global AI governance frameworks such as the EU AI Act, NIST AI RMF, UNESCO’s Recommendation on AI Ethics, and OECD AI Principles. Through thematic mapping, comparative analysis, and governance tool development, the research illustrates how Islamic moral principles can be operationalized within contemporary regulatory structures. The Maqāṣid framework centered on the protection of religion (dīn), life (nafs), intellect (‘aql), lineage (nasl), and property (māl) offers a multidimensional ethical system that supports responsible AI governance.

Key findings highlight that Maqāṣid goals align well with global ethics themes such as fairness, transparency, inclusivity, and accountability. Shared red lines identified in both Islamic ethics and the EU AI Act include prohibitions on biometric surveillance, emotion manipulation, and social scoring, reinforcing the mutual concerns around privacy, dignity, and justice. The NIST RMF functions (GOVERN, MAP, MEASURE, MANAGE) were effectively adapted to include Islamic ethical overlays, yielding a practical checklist for implementing Maqāṣid-aware AI governance.

The scientific contribution of this study lies in its proposal of a hybrid governance model that integrates religious ethical reasoning with secular regulatory practices. This model not only enhances moral legitimacy in Muslim-majority contexts but also contributes to the broader discourse on ethical pluralism in global AI policy. It demonstrates that religious ethics can coexist with and enrich international standards without compromising legal consistency or policy coherence.

The research has broader implications for AI policy development in culturally diverse societies. By integrating Maqāṣid into global AI ethics, policymakers can address the ethical expectations of local communities, thereby improving public trust and compliance. The study also opens pathways for further empirical work, particularly in the areas of ethical risk assessment, religious stakeholder engagement, and context-sensitive auditing frameworks.

Future research should focus on pilot implementations of the Maqāṣid-aware checklist across various sectors such as healthcare, finance, and education to test its adaptability and effectiveness. Cross-cultural studies could also explore the integration of other faith-based ethical systems, contributing to a more inclusive and representative global AI governance architecture.

Ultimately, this study underscores the value of aligning technological innovation with ethical traditions that promote justice, dignity, and public welfare. The inclusion of Maqāṣid al-Sharī‘ah into the AI ethics discourse offers a culturally grounded, normatively rich, and operationally feasible path toward globally resonant AI governance.

REFERENCES

- Akhter, S., Ahmad, M. R., Chibb, M., Zai, A. F., & Yaqoob, M. (2024). Artificial Intelligence in the 21st Century: Opportunities, Risks and Ethical Imperatives. *Kuey*. <https://doi.org/10.53555/kuey.v30i5.3125>
- Annisa, N. N., & Tabassum, N. (2023). Challenges of Multiculturalism: Integration of Religion in State Policy. *Religion and Policy Journal*, 1(1), 8–15. <https://doi.org/10.15575/rpj.v1i1.433>
- Ayinla, B. S., Amoo, O. O., Atadoga, A., Abrahams, T. O., Osasona, F., & Farayola, O. A. (2024). Ethical AI in Practice: Balancing Technological Advancements With Human Values. *International Journal of Science and Research Archive*, 11(1), 1311–1326. <https://doi.org/10.30574/ijstra.2024.11.1.0218>
- Ayling, J., & Chapman, A. (2021). Putting AI Ethics to Work: Are the Tools Fit for Purpose? *Ai and Ethics*, 2(3), 405–429. <https://doi.org/10.1007/s43681-021-00084-x>
- Bednar, K., & Spiekermann, S. (2022). Eliciting Values for Technology Design With Moral Philosophy: An Empirical Exploration of Effects and Shortcomings. *Science Technology & Human Values*, 49(3), 611–645. <https://doi.org/10.1177/01622439221122595>
- Bezerra, A. P., Vieira, Z., & Ribeiro, M. M. R. (2021). Water Governance Assessment at Different Scales: A Reservoir Case Study in the Brazilian Semiarid Region. *RBRH*, 26. <https://doi.org/10.1590/2318-0331.262120200171>
- Birkstedt, T., Minkinen, M., Tandon, A., & Mäntymäki, M. (2023). AI Governance: Themes, Knowledge Gaps and Future Agendas. *Internet Research*, 33(7), 133–167. <https://doi.org/10.1108/intr-01-2022-0042>
- Bleher, H., & Braun, M. (2023). Reflections on Putting AI Ethics Into Practice: How Three AI Ethics Approaches Conceptualize Theory and Practice. *Science and Engineering Ethics*, 29(3). <https://doi.org/10.1007/s11948-023-00443-3>
- Burr, C., & Leslie, D. (2022). Ethical Assurance: A Practical Approach to the Responsible Design, Development, and Deployment of Data-Driven Technologies. *Ai and Ethics*, 3(1), 73–98. <https://doi.org/10.1007/s43681-022-00178-0>
- Folorunso, A., Adewumi, T., Adewa, A., Okonkwo, R., & Olawumi, T. N. (2024). Impact of AI on Cybersecurity and Security Compliance. *Global Journal of Engineering and Technology Advances*, 21(1), 167–184. <https://doi.org/10.30574/gjeta.2024.21.1.0193>
- Georgieva, I., Lazo, C., Timan, T., & Veenstra, A. F. v. (2022). From AI Ethics Principles to Data Science Practice: A Reflection and a Gap Analysis Based on Recent Frameworks and Practical Experience. *Ai and Ethics*, 2(4), 697–711. <https://doi.org/10.1007/s43681-021-00127-3>

- Georgievskaya, A., Tlyachev, T., Danko, D., Chekanov, K., & Corstjens, H. (2023). How Artificial Intelligence Adopts Human Biases: The Case of Cosmetic Skincare Industry. *Ai and Ethics*, 5(1), 105–115. <https://doi.org/10.1007/s43681-023-00378-2>
- Günay, E. K., & Yenilmez, M. İ. (2023). *Artificial Intelligence's Impact on SMEs: AI in Practice Restructuring Small and Medium-Sized Businesses*. <https://doi.org/10.59287/as-proceedings.456>
- Igbinenikaro, E., & Adewusi, A. O. (2024). Developing International Policy Guidelines for Managing Cross-Border Insolvencies in the Digital Economy. *International Journal of Management & Entrepreneurship Research*, 6(4), 1034–1048. <https://doi.org/10.51594/ijmer.v6i4.983>
- Ipe, R. (2019). Ethical Tensions in Designing Ethnographic Research With Schoolchildren in Rural Karnataka. *Global Studies of Childhood*, 9(2), 120–131. <https://doi.org/10.1177/2043610619846090>
- Jobin, A., Ienca, M., & Vayena, E. (2019). The Global Landscape of AI Ethics Guidelines. *Nature Machine Intelligence*, 1(9), 389–399. <https://doi.org/10.1038/s42256-019-0088-2>
- Lam, M. E. (2021). Ethical Reflections on the COVID-19 Pandemic in the Global Seafood Industry: Navigating Diverse Scales and Contexts of Marine Values and Identities. *Maritime Studies*, 20(4), 501–516. <https://doi.org/10.1007/s40152-021-00247-w>
- Liao, F., Adelaine, S., Afshar, M., & Patterson, B. W. (2022). Governance of Clinical AI Applications to Facilitate Safe and Equitable Deployment in a Large Health System: Key Elements and Early Successes. *Frontiers in Digital Health*, 4. <https://doi.org/10.3389/fdgth.2022.931439>
- Morley, J., Elhalal, A., Garcia, F., Kinsey, L., Mökander, J., & Floridi, L. (2021). Ethics as a Service: A Pragmatic Operationalisation of AI Ethics. *Minds and Machines*, 31(2), 239–256. <https://doi.org/10.1007/s11023-021-09563-w>
- Muhammad Syaqiq Al-Azdi Bin Abd Razak, Ismail, S. H. S., & Basir, S. A. (2024). Harmonizing Faith and Governance: A Comprehensive Study of Islamic Governance Frameworks. *Jpi*, 17(2), 87–101. <https://doi.org/10.53840/jpi.v17i2.304>
- Nabben, K. (2024). AI as a Constituted System: Accountability Lessons From an LLM Experiment. *Data & Policy*, 6. <https://doi.org/10.1017/dap.2024.58>
- Nedungadi, P., Tang, K., & Raman, R. (2024). The Transformative Power of Generative Artificial Intelligence for Achieving the Sustainable Development Goal of Quality Education. *Sustainability*, 16(22), 9779. <https://doi.org/10.3390/su16229779>
- Novelli, C., Casolari, F., Rotolo, A., Taddeo, M., & Floridi, L. (2024). AI Risk Assessment: A Scenario-Based, Proportional Methodology for the AI Act. *Digital Society*, 3(1). <https://doi.org/10.1007/s44206-024-00095-1>

- Odero, B., Nderitu, D., & Samuel, G. (2024). The Ubuntu Way: Ensuring Ethical AI Integration in Health Research. *Wellcome Open Research*, 9, 625. <https://doi.org/10.12688/wellcomeopenres.23021.1>
- Peters, D., Vold, K., Robinson, D., & Calvo, R. A. (2020). Responsible AI—Two Frameworks for Ethical Design Practice. *Ieee Transactions on Technology and Society*, 1(1), 34–47. <https://doi.org/10.1109/tts.2020.2974991>
- Pflanzer, M., Traylor, Z., Lyons, J. B., Dubljević, V., & Nam, C. S. (2022). Ethics in Human–AI Teaming: Principles and Perspectives. *Ai and Ethics*, 3(3), 917–935. <https://doi.org/10.1007/s43681-022-00214-z>
- Raquib, A., Channa, B., Zubair, T., & Qadir, J. (2022). Islamic Virtue-Based Ethics for Artificial Intelligence. *Discover Artificial Intelligence*, 2(1). <https://doi.org/10.1007/s44163-022-00028-2>
- Rokhshad, R., Karteva, T., Chaurasia, A., Richert, R., Mörch, C., Tamimi, F., & Ducret, M. (2024). Artificial Intelligence and Smile Design: An E-Delphi Consensus Statement of Ethical Challenges. *Journal of Prosthodontics*, 33(8), 730–735. <https://doi.org/10.1111/jopr.13858>
- Ryan, M. (2022). The Social and Ethical Impacts of Artificial Intelligence in Agriculture: Mapping the Agricultural AI Literature. *Ai & Society*, 38(6), 2473–2485. <https://doi.org/10.1007/s00146-021-01377-9>
- Schiff, D. (2023). Looking Through a Policy Window With Tinted Glasses: Setting the Agenda for U.S. AI Policy. *Review of Policy Research*, 40(5), 729–756. <https://doi.org/10.1111/ropr.12535>
- Schuett, J., Reuel, A., & Carlier, A. (2024). How to Design an AI Ethics Board. *Ai and Ethics*, 5(2), 863–881. <https://doi.org/10.1007/s43681-023-00409-y>
- Stix, C. (2021). Actionable Principles for Artificial Intelligence Policy: Three Pathways. *Science and Engineering Ethics*, 27(1). <https://doi.org/10.1007/s11948-020-00277-3>
- Ulnicane, I., Knight, W., Leach, T., Stahl, B. C., & Wanjiku, W.-G. (2020). Framing Governance for a Contested Emerging Technology: insights From AI Policy. *Policy and Society*, 40(2), 158–177. <https://doi.org/10.1080/14494035.2020.1855800>
- Veale, M., Matus, K., & Gorwa, R. (2023). AI and Global Governance: Modalities, Rationales, Tensions. *Annual Review of Law and Social Science*, 19(1), 255–275. <https://doi.org/10.1146/annurev-lawsocsci-020223-040749>