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Developing a conceptual technical framework for ethical AI in procurement with emphasis on legal oversight

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Abstract

This study presents a conceptual technical framework aimed at promoting ethical AI deployment within the procurement domain, with a particular focus on legal oversight. As the integration of artificial intelligence (AI) technologies in procurement processes becomes increasingly prevalent, concerns surrounding ethical considerations and legal compliance have come to the forefront. The framework outlined in this study offers a structured approach to addressing these challenges, emphasizing the importance of legal oversight in ensuring ethical AI practices. Drawing on existing literature and best practices, the framework outlines key components and principles for guiding the development, implementation, and monitoring of AI systems in procurement contexts. Central to the framework is the recognition of legal requirements and regulatory frameworks governing AI deployment, including data protection laws, liability provisions, and procurement regulations. By incorporating these legal considerations into the design and operation of AI systems, organizations can mitigate risks and ensure compliance with applicable laws. Additionally, the framework emphasizes the need for transparency and accountability in AI procurement processes, advocating for clear documentation, audit trails, and stakeholder engagement mechanisms. Furthermore, the framework outlines strategies for ethical AI design, including the identification and mitigation of algorithmic bias, the promotion of fairness and equity, and the protection of privacy rights. By embedding ethical principles into the development lifecycle of AI systems, organizations can foster trust and confidence among stakeholders while minimizing the potential for harm or discrimination. Overall, the conceptual technical framework presented in this study provides a comprehensive approach to promoting ethical AI in procurement, with a specific emphasis on legal oversight. By integrating legal requirements, ethical principles, and technical considerations, organizations can ensure that AI deployment in procurement processes is conducted responsibly, transparently, and in accordance with legal and ethical standards.

Keywords: Legal Oversight; Emphasis; Ethical AI; Procurement; Conceptual Technical Framework

1. Introduction

Artificial Intelligence (AI) has revolutionized various industries, including procurement, by enhancing efficiency, reducing costs, and improving decision-making (Hassan, et. al., 2024, Ibeh, et. al., 2024). However, the increasing reliance on AI in procurement processes has raised ethical concerns and the need for legal oversight to ensure fair and transparent practices (Addy, et. al., 2024, Gidiagba, et. al., 2023). This paper aims to develop a conceptual technical framework for ethical AI in procurement, with a specific emphasis on legal oversight. AI technologies, such as machine learning and natural language processing, are transforming procurement processes by automating routine tasks, analyzing large datasets for insights, and optimizing supply chain operations (Onyebuchi, 2024, Oyewole, et. al., 2024). From vendor selection to contract management, AI is streamlining procurement functions and driving strategic value for organizations.

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As AI becomes more prevalent in procurement, ensuring ethical AI practices and legal compliance is crucial (Adisa, 2023, Daraojimba, et. al., 2023, Uwaoma, et. al., 2023). Ethical AI involves designing AI systems that are fair, transparent, and accountable. Legal oversight is necessary to ensure that AI systems comply with data protection laws, avoid bias and discrimination, and uphold ethical standards. Failure to address these issues can lead to reputational damage, legal liabilities, and ethical dilemmas.

This paper aims to develop a conceptual technical framework for ethical AI in procurement, focusing on legal oversight. The framework will encompass principles and guidelines for designing, implementing, and monitoring AI systems in procurement to ensure they are ethical, compliant, and aligned with organizational values (Ajayi-Nifise, et. al. 2024, Farayola, et. al., 2023). By emphasizing legal oversight and ethical principles, this framework seeks to promote trust, transparency, and accountability in AI-enhanced procurement processes.

In recent years, the integration of Artificial Intelligence (AI) in procurement has led to significant advancements in efficiency, accuracy, and cost-effectiveness (Adegbite, et. al., 2024, Familoni & Babatunde, 2024). AI technologies, such as machine learning algorithms and natural language processing, have empowered organizations to automate repetitive tasks, analyze vast amounts of data, and make informed decisions in real-time (Raji, et. al., 2024, Tula, et. al., 2023). However, along with these benefits comes a pressing need to address the ethical implications and legal requirements associated with AI deployment in procurement.

Ethical AI in procurement refers to the responsible design, development, and use of AI systems that prioritize fairness, transparency, and accountability (Adisa, et. al., 2024, Ebirim, et. al., 2024). This entails ensuring that AI algorithms do not perpetuate biases, that decision-making processes are explainable and justifiable, and that the use of AI respects privacy and data protection laws (Oriekhoe, et. al., 2024, Orieno, et. al., 2024). Legal oversight is crucial to ensure that AI systems comply with existing regulations and standards, such as the General Data Protection Regulation (GDPR) and the principles outlined in the AI Ethics Guidelines by the European Commission.

The thesis of this paper is to develop a conceptual technical framework that outlines the principles and guidelines for integrating ethical AI practices with legal oversight in procurement processes. This framework aims to provide organizations with a structured approach to designing, implementing, and monitoring AI systems in procurement, ensuring that they adhere to ethical standards and legal requirements (Adegbite, et. al., 2024, Chisom, Unachukwu & Osawaru, 2024). By emphasizing the importance of ethical AI and legal oversight, this framework seeks to promote trust, transparency, and accountability in AI-enhanced procurement processes, ultimately driving sustainable and responsible AI adoption.

2. Literature Review

The literature on ethical AI in procurement with an emphasis on legal oversight is still emerging but has gained significant traction in recent years due to the growing adoption of AI technologies in procurement processes (Adeghe, Okolo & Ojeyinka, 2024, Daraojimba, et. al., 2023). This section provides a review of the theoretical foundations, legal and regulatory frameworks, and key concepts related to ethical AI and legal oversight in procurement. Ethical AI in procurement is grounded in ethical decision-making theories, such as consequentialism, deontology, and virtue ethics (Raji, et. al., 2024, Udeh, et. al., 2023). These theories provide a framework for evaluating the ethical implications of AI algorithms and processes in procurement.

The concept of fairness in AI, particularly in procurement, has been a focal point of research. Scholars have explored various definitions of fairness, such as statistical parity, disparate impact, and individual fairness, to address bias in AI algorithms. Transparency and Explainability (Adeghe, Okolo & Ojeyinka, 2024, Eden, Chisom & Adeniyi, 2024). Theoretical frameworks emphasize the importance of transparency and explainability in AI algorithms to ensure that procurement decisions are understandable and justifiable to stakeholders.

General Data Protection Regulation (GDPR): The GDPR sets out legal requirements for the processing of personal data, including AI systems used in procurement (Ajayi-Nifise, et. al. 2024, Falaiye, et. al., 2024). Organizations must ensure that AI systems comply with GDPR principles, such as data minimization and purpose limitation. Legal frameworks governing procurement processes also apply to AI systems used in procurement (Onyebuchi, 2019, Oriekhoe, et. al., 2024). These regulations include requirements for fairness, transparency, and competition in procurement decisions.

AI algorithms can exhibit bias, leading to unfair outcomes in procurement. Scholars have highlighted the importance of identifying and mitigating bias in AI algorithms to ensure fairness (Adeghe, Okolo & Ojeyinka, 2024, Chisom, Unachukwu & Osawaru, 2023). Ethical AI in procurement must comply with privacy and data protection laws. Organizations must

implement measures to protect personal data processed by AI systems in procurement. Legal oversight in AI-enhanced procurement requires organizations to be accountable for their AI systems' decisions (Hernandez & Morris, C2023, Zhao, 2024). This includes providing transparency into how AI systems are designed, implemented, and monitored.

Overall, the literature emphasizes the importance of integrating ethical principles and legal oversight into AI systems used in procurement (Adekugbe & Ibeh, 2024, Ewim, 2023). By adopting a holistic approach that considers ethical, legal, and regulatory aspects, organizations can ensure that their AI systems in procurement are fair, transparent, and compliant with legal requirements. Developing a conceptual technical framework for ethical AI in procurement with an emphasis on legal oversight requires a deep understanding of the theoretical foundations, legal frameworks, and key concepts in this field (Adisa, et. al., 2024, Eden, Chisom & Adeniyi, 2024). While the literature on this specific topic is still evolving, existing studies provide valuable insights into the complexities and challenges associated with integrating ethical principles and legal requirements into AI systems in procurement.

Various ethical theories, such as consequentialism, deontology, and virtue ethics, provide a philosophical basis for evaluating the ethical implications of AI systems in procurement (Adekugbe & Ibeh, 2024, Eyo-Udo, Odimarha & Kolade, 2024). These theories emphasize the importance of considering the consequences of AI decisions, the adherence to ethical principles, and the cultivation of virtuous behavior in AI design and deployment. Theoretical frameworks focusing on fairness and bias mitigation in AI highlight the need to address algorithmic biases that may lead to unfair outcomes in procurement. Concepts such as algorithmic fairness, bias detection, and bias mitigation strategies are critical in ensuring that AI systems are fair and unbiased (Al Hamad, et. al., 2024, Eyo-Udo, Odimarha & Kolade, 2024).

Transparency and Explainability: Theoretical perspectives on transparency and explainability underscore the importance of designing AI systems that are transparent and understandable to stakeholders. Transparency enhances accountability and trust in AI systems, especially in complex decision-making processes such as procurement (Eden, Chisom & Adeniyi, 2024, Ilugbusi, et. al., 2024). General Data Protection Regulation (GDPR): The GDPR sets forth legal requirements for the processing of personal data, including AI systems used in procurement. Compliance with GDPR principles, such as data minimization and purpose limitation, is essential to ensure that AI systems are legally compliant.

Procurement Regulations: Legal frameworks governing procurement processes also apply to AI systems used in procurement (Adisa, et. al., 2024, Ihemereze, et. al., 2023). These regulations require organizations to adhere to principles of fairness, transparency, and competition in their procurement decisions, which are also relevant to AI systems. Algorithmic Bias and Fairness: Addressing algorithmic bias and ensuring fairness in AI systems are critical considerations in procurement. Concepts such as fairness metrics, bias detection techniques, and fairness-aware algorithms are essential for mitigating bias and ensuring fairness.

Privacy and Data Protection: Ethical AI in procurement must comply with privacy and data protection laws (Akpuokwe, Chikwe & Eneh, 2024, Ewim, et. al., 2023). Organizations must implement measures to protect personal data processed by AI systems in procurement, including data anonymization, encryption, and access control. Legal oversight in AI-enhanced procurement requires organizations to be accountable for their AI systems' decisions. This includes providing transparency into how AI systems are designed, implemented, and monitored, as well as establishing mechanisms for recourse and redress for individuals affected by AI decisions.

In conclusion, the literature underscores the importance of developing a comprehensive framework that integrates ethical principles and legal requirements into AI systems in procurement (Adisa, et. al., 2024, Chisom, Unachukwu & Osawaru, 2023). By adopting a holistic approach that considers theoretical foundations, legal frameworks, and key concepts, organizations can ensure that their AI systems in procurement are ethical, transparent, and legally compliant.

3. Methodology

Developing a conceptual technical framework for ethical AI in procurement with an emphasis on legal oversight involves a systematic approach to conceptual framework development, data collection, and analysis (Akpuokwe, Chikwe & Eneh, 2024, Eden, Chisom & Adeniyi, 2024). This methodology outlines the steps taken to develop the framework. research design for this study involves the development of a conceptual framework that outlines the key components of ethical AI in procurement with an emphasis on legal oversight. The framework will be based on a review of existing literature, case studies, and best practices in the field. The conceptual framework will be developed iteratively, taking into account feedback from experts in the field and stakeholders involved in procurement processes.

The primary method of data collection for this study is a comprehensive literature review. The literature review will involve identifying and analyzing existing studies, reports, and articles related to ethical AI in procurement and legal

oversight (Adewusi, et. al., 2023, Uwaoma, et. al., 2023). Additionally, case studies of organizations that have successfully implemented ethical AI practices in procurement will be examined to extract best practices and lessons learned. The data analysis for this study will involve synthesizing the findings from the literature review and case studies to develop the conceptual framework (Chikwe, 2019, Egieya, et. al., 2024). The framework will be organized into key components, such as ethical principles, legal requirements, and best practices for AI deployment in procurement. Comparative analysis will be conducted to identify common themes, patterns, and differences across different legal jurisdictions and industries (Al Hamad, et. al., 2024, Uwaoma, et. al., 2023). This analysis will help identify best practices and recommendations for ethical AI in procurement with an emphasis on legal oversight.

The methodology outlined above provides a structured approach to developing a conceptual technical framework for ethical AI in procurement (Adekugbe & Ibeh, 2024, Eden, Chisom & Adeniyi, 2024). By combining a comprehensive literature review with case studies and comparative analysis, this study aims to provide valuable insights into the key components of ethical AI in procurement and legal oversight (Onyebuchi, et. al., 2023, Raji, et. al., 2024). Involving stakeholders, including procurement professionals, legal experts, AI developers, and ethics specialists, in the development process can provide valuable insights and ensure that the framework is comprehensive and practical. Stakeholder engagement can be facilitated through interviews, focus groups, and workshops.

The development of the conceptual framework should be iterative, allowing for continuous refinement based on feedback and emerging trends (Al Hamad, et. al., 2024, Ihemereze, et. al., 2023, Raji, et. al., 2024). This iterative approach ensures that the framework remains relevant and adaptable to changing legal and ethical requirements. The framework should include a detailed analysis of relevant legal and ethical principles, such as data protection laws, anti-discrimination regulations, and procurement guidelines. This analysis should inform the development of specific guidelines and recommendations for ethical AI deployment in procurement.

In addition to literature review, case studies and best practices from organizations that have successfully implemented ethical AI in procurement can provide valuable insights (Ashok, et. L., 2022, Neumann, Guirguis & Steiner, 2024). These case studies can help identify practical challenges and solutions, as well as lessons learned (Al Hamad, et. al., 2023, Egieya, et. al., 2023). The conceptual framework should be validated and tested in real-world procurement scenarios to ensure its effectiveness and practicality. This validation can be done through pilot projects or simulations to assess the framework's impact on decision-making processes.

Finally, the development process should undergo an ethical review to ensure that the framework upholds ethical principles and respects the rights of individuals affected by AI in procurement (Adewusi, et. al., 2023, Eden, Chisom & Adeniyi, 2024). This review should involve ethics experts and should address issues such as transparency, accountability, and fairness. By following these additional steps, the methodology for developing a conceptual technical framework for ethical AI in procurement can be further enhanced, ensuring that the framework is robust, practical, and ethically sound.

4. Conceptual Technical Framework for Ethical AI in Procurement

Developing a conceptual technical framework for ethical AI in procurement requires a comprehensive approach that integrates legal oversight components, ethical AI design principles, and considerations for integrating legal and ethical considerations into AI procurement processes (Adeoye, et. al., 2024, Uwaoma, et. al., 2023). The framework should ensure that AI systems used in procurement comply with relevant data protection laws, such as the General Data Protection Regulation (GDPR) in the European Union or the California Consumer Privacy Act (CCPA) in the United States. This includes ensuring that personal data is processed lawfully, transparently, and for specified purposes.

The framework should address issues of liability and accountability in AI procurement. This includes defining clear lines of responsibility for AI systems, establishing mechanisms for accountability in case of errors or misuse, and ensuring that procurement contracts include provisions for liability and indemnification (Adelekan, et. al., 2024, Olanike et. al., 2023, Raji, et. al., 2024). The framework should incorporate principles of fairness and non-discrimination in AI design and deployment. This includes ensuring that AI systems do not perpetuate or amplify existing biases and that decisions made by AI systems are fair and equitable.

The framework should promote transparency and explainability in AI systems (Adekugbe & Ibeh, 2024, Uwaoma, et. al., 2023). This includes ensuring that AI systems provide clear explanations for their decisions and that stakeholders can understand the logic and reasoning behind those decisions. The framework should prioritize privacy protection in AI design and deployment. This includes implementing privacy by design principles, ensuring that AI systems minimize the collection and use of personal data, and protecting sensitive information from unauthorized access.

The framework should include guidelines and requirements for procuring AI systems that adhere to legal and ethical standards. This includes defining criteria for evaluating AI vendors, assessing the impact of AI systems on privacy and data protection, and ensuring compliance with relevant laws and regulations (Adelekea & Onyebuchib, 2023, Udo, et. al., 2023). The framework should include risk assessment and mitigation strategies for addressing legal and ethical risks associated with AI in procurement. This includes identifying potential risks, such as bias or privacy violations, and implementing measures to mitigate those risks, such as regular audits and monitoring. A conceptual technical framework for ethical AI in procurement should encompass legal oversight components, ethical AI design principles, and strategies for integrating legal and ethical considerations into AI procurement processes (Adelekan, et. al., 2024, Olagumju Chinedum et. al., 2023). By addressing these key areas, organizations can ensure that their AI systems are both legally compliant and ethically responsible, leading to more transparent and accountable procurement practices.

Developing a conceptual technical framework for ethical AI in procurement is crucial for ensuring that AI systems used in procurement processes adhere to legal requirements and ethical standards (Adeniyi, et. al., 2024, Oladeinde, et. al., 2023). This framework should include detailed guidelines and principles that govern the design, deployment, and use of AI systems in procurement. One important aspect of the framework is to establish clear guidelines for data protection and privacy. This includes defining how personal data should be collected, processed, and stored by AI systems, ensuring that it complies with relevant data protection laws and regulations. The framework should also address issues related to data security, such as encryption and data anonymization, to protect sensitive information from unauthorized access.

Another key component of the framework is to incorporate principles of fairness and non-discrimination in AI design. This involves ensuring that AI systems do not perpetuate or amplify existing biases and that they make decisions that are fair and equitable. The framework should include guidelines for evaluating the fairness of AI algorithms and for mitigating any biases that are identified (Adeniyi, et. al., 2024, Oladeinde, et. al., 2023). Transparency and explainability are also important principles that should be included in the framework. AI systems should be designed in such a way that their decisions can be understood and explained by stakeholders. This includes providing clear explanations for how decisions are made, as well as mechanisms for stakeholders to challenge those decisions if necessary.

Additionally, the framework should include guidelines for ensuring accountability and liability in AI procurement. This includes defining clear lines of responsibility for AI systems and establishing mechanisms for holding stakeholders accountable for their decisions (Al Hamad, et. al., 2024, Okoye, et. al., 2024). The framework should also include provisions for addressing liability issues that may arise from the use of AI systems in procurement. A conceptual technical framework for ethical AI in procurement should encompass guidelines and principles that govern data protection, fairness, transparency, and accountability in the design and use of AI systems. By adhering to these principles, organizations can ensure that their AI systems are ethical, responsible, and compliant with legal requirements.

5. Case Studies

Company A, a leading technology firm, sought to enhance the transparency and accountability of its procurement processes by implementing a conceptual technical framework for ethical AI with a focus on legal oversight (Adeniyi, et. al., 2024, Okoro, et. al., 2023). The company began by conducting a comprehensive review of its existing procurement practices and identifying areas where AI could be integrated to improve efficiency and fairness. The company then developed a set of guidelines and principles for the design, deployment, and use of AI systems in procurement (Onesi-Ozigagun, et. al., 2024, Udo, et. al., 2023). These guidelines included provisions for data protection, fairness, transparency, and accountability, aligning with legal requirements and ethical standards. The company also established mechanisms for monitoring and evaluating the performance of AI systems to ensure compliance with the framework.

As a result of implementing the conceptual framework, Company A was able to improve the transparency and accountability of its procurement processes. The framework helped the company identify and mitigate potential biases in its AI systems, ensuring that decisions were fair and equitable (Al Hamad, et. al., 2024, Okogwu, et. al., 2023). Additionally, the framework enhanced the company's ability to comply with data protection laws and regulations, reducing the risk of legal liabilities. Company B, a global manufacturing company, faced challenges in integrating legal oversight and ethical AI principles into its procurement processes. The company encountered difficulties in ensuring the transparency and explainability of its AI systems, particularly in complex procurement decisions.

One of the key lessons learned by Company B was the importance of stakeholder engagement in the development and implementation of the framework (Onukogu, et. al., 2023, Onyebuchi, et. al., 2024). The company found that involving stakeholders early in the process helped to identify potential issues and ensure that the framework aligned with the company's values and objectives. Another challenge faced by Company B was the need to continuously update and refine

the framework in response to evolving legal and ethical standards (Adeniyi, et. al., 2024, Okafor, et. al., 2023). The company found that regular reviews and updates were necessary to ensure that the framework remained relevant and effective in addressing emerging issues. The case studies of Company A and Company B highlight the importance of developing a conceptual technical framework for ethical AI in procurement with a focus on legal oversight (Chikwe, Eneh & Akpuokwe, 2024, Udo, et. al., 2023). By implementing such a framework, organizations can improve the transparency, fairness, and accountability of their procurement processes, leading to more ethical and responsible use of AI.

Company C, a multinational retailer, embarked on a journey to integrate legal oversight and ethical AI principles into its procurement processes. The company recognized the importance of ensuring that its AI systems complied with legal requirements and ethical standards to enhance transparency and accountability (Al Hamad, et. al., 2024, Ojeyinka & Omaghomi, 2024). To achieve this, Company C conducted a thorough assessment of its procurement practices and identified areas where AI could be applied to improve efficiency and fairness. The company then developed a conceptual technical framework that outlined guidelines and principles for the design, deployment, and use of AI in procurement.

One of the key challenges faced by Company C was ensuring that its AI systems were transparent and explainable. The company implemented measures to ensure that stakeholders could understand how decisions were made by AI systems, including providing access to decision-making algorithms and documentation (Ayeni, et. al., 2024, Ojeyinka & Omaghomi, 2024). By integrating legal oversight and ethical AI principles into its procurement processes, Company C was able to improve the transparency and accountability of its operations. The company's efforts resulted in more informed and ethical decision-making, leading to increased trust from stakeholders and improved procurement outcomes.

Company D, a financial services firm, encountered several legal and ethical challenges in integrating AI into its procurement processes. The company faced issues related to data privacy, algorithmic bias, and liability, which required careful consideration and mitigation strategies. To address these challenges, Company D developed a conceptual technical framework that emphasized legal oversight and ethical AI principles. The framework included provisions for ensuring data privacy and security, mitigating algorithmic bias, and defining liability frameworks for AI-driven decisions.

One of the key lessons learned by Company D was the importance of continuous monitoring and evaluation of its AI systems (Al Hamad, et. al., 2024, Ojeyinka & Omaghomi, 2024). The company found that regular audits and assessments were essential to ensure that its AI systems were operating ethically and in compliance with legal requirements. In conclusion, the case studies of Company C and Company D demonstrate the importance of developing a conceptual technical framework for ethical AI in procurement with a focus on legal oversight. By integrating legal and ethical considerations into their AI systems, organizations can enhance transparency, accountability, and trust in their procurement processes (Chikwe, Eneh & Akpuokwe, 2024, Onesi-Ozigagun, et. al., 2024).

6. Discussion

The conceptual framework for ethical AI in procurement has significant implications for organizations and policymakers. It emphasizes the importance of integrating legal oversight and ethical principles into AI systems to ensure transparency, accountability, and fairness in procurement processes (Al Hamad, et. al., 2024, Ogunjobi, et. al., 2023). By adopting this framework, organizations can enhance trust with stakeholders, improve decision-making, and mitigate the risks associated with AI deployment.

Implementing legal oversight and ethical AI principles in procurement processes presents several challenges and opportunities (Adeniyi, et. al., 2024, Ogedengbe, et. al., 2023). One challenge is ensuring compliance with complex and evolving legal requirements, such as data protection laws and regulations. Organizations must also address issues related to algorithmic bias, data privacy, and accountability. However, implementing legal oversight and ethical AI principles also presents opportunities for organizations to improve their procurement processes (Ayorinde, et. al., 2024, Ofodile, et. al., 2024). By integrating these principles, organizations can enhance transparency, fairness, and efficiency in procurement decision-making. They can also build trust with stakeholders and improve the overall reputation of their procurement practices.

To effectively implement legal oversight and ethical AI principles in procurement, organizations and policymakers should consider the following recommendations. Organizations should develop clear guidelines and policies for the design, deployment, and use of AI in procurement (Atadoga, et. al., 2024, Odulaja, et. al., 2023). These guidelines should include provisions for ensuring data privacy, mitigating algorithmic bias, and defining liability frameworks.

Organizations should provide training and support for procurement professionals to ensure they understand the legal and ethical implications of AI deployment. This training should cover topics such as data protection, algorithmic bias, and ethical decision-making.

Organizations should collaborate with stakeholders, including government agencies, civil society organizations, and industry partners, to develop and implement legal oversight and ethical AI principles in procurement (Ayeni, et. al., 2024, Odeyemi, et. al., 2024). Organizations should regularly monitor and evaluate their AI systems to ensure they comply with legal requirements and ethical standards. This includes conducting audits and assessments to identify and mitigate risks. Organizations should engage in continuous learning and adaptation to keep pace with evolving legal and ethical standards in AI deployment. This includes staying informed about new developments in the field and updating their policies and practices accordingly.

The development of a conceptual technical framework for ethical AI in procurement with emphasis on legal oversight is crucial for enhancing transparency, accountability, and fairness in procurement processes (Ayeni, et. al., 2024, Odeyemi, et. al., 2024). By implementing this framework, organizations can improve their procurement practices and build trust with stakeholders. Implementing a conceptual technical framework for ethical AI in procurement with an emphasis on legal oversight is a complex endeavor that requires careful consideration of various factors. One of the key aspects to consider is the integration of legal requirements into the design and development of AI systems used in procurement (Ololade, 2024, Olurin, et. al., 2024). This includes ensuring compliance with data protection laws, such as the General Data Protection Regulation (GDPR) in the European Union, and other relevant regulations.

Another important consideration is the need for transparency and accountability in AI systems. Organizations must ensure that their AI systems are transparent and explainable, allowing stakeholders to understand how decisions are made (Ayeni, et. al., 2024, Mhlongo, et. al., 2024). This is particularly important in procurement, where decisions can have significant financial and reputational implications. Additionally, organizations must address the issue of algorithmic bias in AI systems used in procurement. Bias can occur at various stages of the AI lifecycle, from data collection and preprocessing to model training and deployment. Organizations must implement measures to identify and mitigate bias to ensure fair and equitable outcomes.

Furthermore, organizations should consider the ethical implications of AI deployment in procurement (Ayeni, et. al., 2024, Kaggwa, et. al., 2024). This includes ensuring that AI systems respect human rights, avoid harm, and promote the well-being of all stakeholders. Organizations should also consider the broader societal impact of AI deployment and take steps to mitigate any negative effects. Developing a conceptual technical framework for ethical AI in procurement with an emphasis on legal oversight is essential for ensuring that AI systems used in procurement are fair, transparent, and accountable (Ololade, 2024, Usman, et. al., 2024). By addressing these issues, organizations can enhance trust with stakeholders and improve the overall integrity of their procurement processes.

7. Conclusion

In conclusion, the development of a conceptual technical framework for ethical AI in procurement, with a focus on legal oversight, is crucial for ensuring that AI systems used in procurement are ethical, transparent, and accountable. This framework incorporates legal requirements, such as data protection laws, and ethical principles, such as fairness and transparency, into the design and deployment of AI systems. The framework also highlights the importance of addressing algorithmic bias and ensuring that AI systems respect human rights and promote the well-being of all stakeholders. By adopting this framework, organizations can enhance trust with stakeholders and improve the integrity of their procurement processes.

It is essential for organizations to adopt this framework to ensure that their AI systems are ethical, transparent, and accountable. This includes implementing measures to identify and mitigate bias, ensuring transparency and explainability in AI systems, and promoting the well-being of all stakeholders. The development of a conceptual technical framework for ethical AI in procurement, with an emphasis on legal oversight, is essential for ensuring that AI systems used in procurement are fair, transparent, and accountable. By adopting this framework, organizations can enhance trust with stakeholders and improve the integrity of their procurement processes.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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