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Navigating the Intersection of Artificial Intelligence and ICT Dispute Resolution: A Qualitative Exploration of Challenges, Opportunities, and Ethical Considerations in Business Intelligence

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Abstract

AI enhances ICT dispute resolution by improving efficiency, yet the subject of ethical AI use and its governance and socio-technical consequences require regulation to ensure that innovation does not override justice. This study examines the issues, prospects, and ethical considerations of AI deployment in ICT dispute resolution and develops a course of action for increasing stakeholder confidence in AI solutions. Semi-structured interviews with legal professionals, including policymakers and AI experts, were used, and a qualitative research paradigm was followed. The method used for data analysis was thematic, and it involved categorizing challenges and opportunities related to the adoption of OER implementations by stakeholders and their perceptions of them with further reference to like articles. AI improves the speed of conflict resolution through algorithmic processing and advanced analytics while it raises the questions of fairness through computing algorithms, responsibilities, and openness. These problems further underscore the importance of proper regulation and cooperation on an international level. To overcome such issues, potential participants stressed using XAI, the human-in-the-loop approach, and raising awareness among stakeholders. The frameworks presented suggest implementing a bio-ethical, legal, and technological approach to make AI systems more reliable and fairer. This study offers a stakeholder approach to understanding the sociotechnical consequences of AI in the dispute resolution process and recommendations for overcoming them. It has provided suggested frameworks that fill the void of governance and ethics to address AI development in the academic circle and to practitioners in making equitable AI possible.

Keywords: Artificial Intelligence (AI), Information Communication Technologies (ICT), Dispute Resolution, Arbitration, AI Regulations.

I. Introduction

The incorporation of Artificial Intelligence (AI) into Information and Communication Technology (ICT) into the different fields of improvement that have been experienced is apparent in dispute resolution. AI improves decision-making and reduces the probability of human errors that may arise because of emotions during conflict-solving. In the past, AI in commercial analytics and recommendation systems commenced with a linear model approach and advanced to the stage of machine learning models capable of analyzing complex data. This evolution also resonates with the general trend of digitalization of processes in which AI technologies are introduced as tools to optimize various processes and make decisions in legal settings (Agus, 2023; Solhchi & Baghbanno, 2023).

Recent developments in ICT and AI technologies like natural language processing and analytical or predictive models have also impacted ICT disputes in the sense that communication and negotiations have improved. For example, AI systems can learn from historical dispute data to find patterns and decisions on solving disputes more effectively and efficiently (Motta, 2023; Vy, 2023). Furthermore, the increase in online dispute resolution (ODR) platforms means that AI is being used to address disputes in a digital context when normal course may not work as expected (Zeleznikow, 2020). These platforms integrate AI in their functioning to reduce human intervention, improve user interface, and generate nearly real-time information, which has the ability to change how disputes will be resolved in the context of the digital world

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(Motta, 2023; Zeleznikow, 2020).

However, certain challenges were experienced during the incorporation of AI in the resolution of ICT disputes. Particularly crucial in this discourse are ethical concerns, transparency issues, and data privacy. There are concerns related to the responsibility linked to deploying AI systems, which can make decisions instead of human judgment (Agus, 2023; Vy, 2023). Additionally, the complexity that arises due to the idea that AI makes decisions based on algorithms can cause distrust among the stakeholders and the acceptance of AI resolutions (Niblett, 2024). In the current state of research on AI in dispute resolution, there are deficiencies in comprehending the social and technical complexity of the use of AI, including its approaches to human mediators and the legal process's honesty (Agus, 2023; Vy, 2023; Barysė & Sarel, 2023).

Based on the gaps highlighted above, this study is focused on ascertaining the course of implementing AI in ICT dispute resolution. Some of these challenges are ethical issues concerning the formation of self-learning algorithms, how the algorithms make decisions, and how different information is protected against hacking (Vy, 2023; Barysė & Sarel, 2023). Moreover, more research has to be dedicated to the sociotechnical impacts of AI since the literature focuses on technology-human behavior and institutional environment relationships (Agus, 2023; Vy, 2023; Barysė & Sarel, 2023). This research seeks to fill these gaps by assessing the stakeholder's impression of the ethical aspects concerning AI and constructing frameworks for addressing the challenges but enhancing the advantages of AI in dispute system evaluation with reference to the following research questions:

RQ01: What are the main challenges and opportunities presented by AI in ICT dispute resolution?

RQ02: How do stakeholders perceive the ethical implications of AI integration in dispute resolution?

RQ03: What frameworks can be developed to address the identified challenges while maximizing the benefits of AI?

Further, the aims and objectives of this study are threefold:

1. 1. To discuss the complexities and prospects of AI in ICT dispute resolution.
2. 2. To understand the concerns of the stakeholders and the possible ethical effects of AI integration and
3. 3. To suggest effective frameworks to promote the ethical use of AI in legal sectors.

In addition, the research has significant implications for academia. It extends the body of knowledge in the field of AI and conflict resolution but also for practice because it provides potential actors in dispute resolution with lessons learned on how to implement AI in a proper manner. The research triangulated two emerging fields of AI and ICT manifest in dispute resolution and how the practice area and profession have been shaped by these two fields. It becomes highly important to know more about AI technologies as they are developed more and more to see how they can impact dispute resolution. The goal of this research is to shed light on these issues and contribute to a better understanding of how the potential of AI can be realized responsibly in ICT dispute resolution.

II. Literature Review

Theoretical Framework

The theoretical analysis of Dispute Systems Design (DSD) AI and ICT integration thus intertwines several existing theories and socio-technical frameworks. Through this framework, scholars can gain an appreciation of the implications of AI within legal domains, especially concerning arbitration and or any manner of dispute resolution.

Among the proposed solutions, there is a relatively well-known idea of granting legal personality to AI and establishing the rights and duties of such entities. This recognition could clarify issues of liability and ownership in disputes involving AI (Xudaybergenov, 2023: Staszkiewicz, 2024). However, the present legal systems perform a primary fixation on AI as an object of the law rather than as a subject, which makes its application in legal practices challenging (Hapsari, 2024). It also provokes important discussions about how much blame or responsibility belongs to AI, particularly in relation to automated decision-making in legal contexts (Weber-Lewerenz, 2021).

Therefore, socio-technical frameworks are quite helpful in identifying how AI can be integrated into legal fields. These frameworks show how new technologies integrate with social structures, calling attention to how technological progress will reform legal regulation and culture (Sadykov, 2024). For instance, questions of AI incorporation in decision-making processes in law require a wider view in terms of the treatment of ethics of accountability, transparency, and preserving human judgment, as advanced by Nweke in 2024. The ethical switch model, which recently emerged as the approach to change the way ethical considerations are incorporated

into AI systems, plays a role here (Sadykov, 2024).

Issues that are currently being discussed in this context often relate to concerns of effectiveness, on the one hand, and ethical concerns, on the other. Advocates believe that AI can substantially increase the effectiveness of dispute resolution processes thanks to automation and the use of big data (Klochko, 2023). However, critics have noted that such three examples are only hopes and that AI algorithms will have bias, resulting in unfair judgments by courts and the undermining of fairness in legal processes (Kronivets, 2024). It demonstrates the importance of properly developed legal regulation with regard to the available potential of AI and the required ethical norms for the legal sphere (Garcia-Vergara, 2023).

In addition, the adoption of AI brings into consideration the presence of human supervision within the process of solving disputes. Although AI is comprehensively able to process big data and predict the results, the role of human discretion in handling more sensitive legal matters is an ongoing, challenging debate (Batchu et al., 2021). The problem here is how to make sure that the role played by the AI system is supportive and not a replacement for human decisions, hence the due process of the law (Chandra, 2023). Finally, the apparent legal, ethical, and socio-technical contingencies form the nuanced theoretical context of AI and ICT in dispute resolution. It means that the discussion of the pros and cons of using AI in legal practice will continue because the further development of this approach is still a topic of debate.

Current Research on AI in Dispute Resolution

The blending of Artificial Intelligence (AI) into ADR, especially arbitration, has received much attention in the current literature. New research has, therefore, stressed the importance of AI in improving the efficiency of processes that are fundamental to dispute resolution. For instance, in arbitration, AI can review and analyze documents in a shorter time than traditional practice, and that shortens cost and time (Agus, 2023; Prabhavathi, 2023). Vy (2023) and Zhang (2023) postulated that AI applications can enhance predictability in the determination of disputes, which will lead to early resolution and shorten the length of disputes. Further, the amalgamation of AI with the blockchain system is suggested in order to improve the credibility of the process of dispute resolution, especially in such fields as international trade (Khan, 2024; Ngcobo, 2024). This synergy may result in more intelligent decision-making by using the previous data to estimate the results of agreements based on previous disputes (Kalogeraki, 2024; Barnett, 2024).

However, the incorporation of artificial intelligence in solving disputes has its own share of drawbacks. Traditional risks that have been highlighted, along with new risks associated with AI, include Pre-programmed bias: This is where decision-making involving the use of AI algorithms is skewed, Dependent on AI developers or vendors. Researchers find that the discriminative nature of training data means that AI tends to reproduce bias, making its applicability in lawful processes questionable (Lopes, 2024; Singh & Lin, 2020). Also, there is a major challenge, which is the opacity of AI decision-making making, which sometimes makes the stakeholders unable to comprehend or challenge the decisions made by the AI system (Vy, 2023; Lyons, 2021). Ethical issues arise on who is to blame for the actions performed by the AI systems and the right to challenge decisions made by the systems, which are vital in enforcing public trust on matters of law (Abbott, 2023; Haegen, 2023).

The assessment of ethics as applied to AI in dispute resolution is just as applicable to governance issues. Currently, there is a lack of experience in AI applications, which accumulated extensive changes when existing legal regulation was insufficient or non-existent, as the pace of AI advancement overwhelms traditional standards (Misra et al., 2020; Kevins, 2022). Territories remain preoccupied with creating rules that would allow for the usage of AI ethically and, at the same time, promote inventions (Abbott, 2023; Misra et al., 2020). Therefore, there is a need for proper governance arsenals that surpass simple assessment of such solutions and take into account questions of accountability, transparency, and free of prejudice (Wing et al., 2021; Abbott, 2023).

Overall, there are significant risks that AI, when implemented in arbitration and dispute resolution, can offer maximum efficiency and effectiveness while creating important questions of ethical and governance issues. The dynamics of properly taking advantage of AI and, at the same time, introducing fairness, transparency, and accountability will play a crucial role in the further development of AI. Further research and debates among the stakeholders in handling these challenges will be significant in the future advancement of dispute resolution measures.

Gaps in Existing Procedures

The current measures for using artificial intelligence

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in ICT dispute resolution are quite elaborate. Generally, the socio-technical analysis of AI remains a neglected research area with little cross-disciplinary interest. Current studies mainly pay attention to technology application features or legal factors without consideration of social and ethical prospects alongside institutional factors and structures. Furthermore, primary research focusing on the perceived incorporation of AI by various stakeholders remains limited. It is crucial to define its opportunity, risk, and acceptance for effective solutions that are acceptable to legal practitioners, policymakers, and users. It is therefore important to fill these gaps in the current frameworks that guide the use of AI in the resolution of ICT disputes to come up with sound frameworks that will ensure that the use of AI is ethical, transparent, and effective in solving the existing disputes hence creating trust among all the stakeholders involved.

III. Methodology

This research uses a qualitative research approach to assess the challenges, opportunities, and ethical concerns when adopting AI in ICT dispute resolution. This approach is appropriate when studying socio-technical ensembles, where the controversy of technology, people, and institutions cannot be easily distilled from one another. Research Design The qualitative research method was adopted because it is best suited to offering detailed responses from stakeholders, as well as capturing their perceptions and experiences within their contexts. While the quantitative approaches focus on numerical data and the generality of findings, the qualitative methods are particularly good at analyzing relationships, attitudes, and perceptions in a multifaceted social environment. It is especially promising to examine the subjective aspects of the role of AI in dispute resolution, including how the legal practitioners, developers of AI tools, and policymakers live and apprehend it. Creswell and Poth (2018) described that the use of qualitative research is needed to respond to how and why questions in social and technical contexts, therefore applicable to ethical issues, accountabilities, and trust with reference to AI systems.

Data Collection Methods

The primary method of data collection used in the study is the semi-structured interviews. Key Stakeholder Interviews depend on face-to-face conversations with specific individuals, delivering detailed information in a private setting. Legal experts can provide their experience of the real-life application of AI in the scenario of dispute resolution, and AI specialists and policymakers can provide information about the technical and regulatory perspective. This technique is particularly useful for obtaining and comparing concrete, contextualized data and revealing subtle attitudes (Rubin & Rubin, 2011). The two methods of data collection also guarantee a holistic analysis of the research problem; that is, it considers the views of individual stakeholders as well as the group views.

Data Analysis

Thematic analysis is used to analyze the data in this study because it systematically enables the identification and accommodation of themes and patterns in the data. The process starts with acquaintances, then coding, in which responses are sorted according to the frequency of topics, such as difficulties, opportunities, and ethics. According to Braun and Clarke (2006), thematic analysis is useful where the data is vast and diverse, hence constructive flexibility without any compromise on rigidity. Coding techniques are applied so as to make the analysis more consistent as well as intensive. For example, questions related to ethical concerns about artificial intelligence-based decision-making will be under ethical risk, whereas potential benefits such as cost savings attributed to AI use will be under opportunity. As such, this approach provides for a systematic examination of the data while paying attention to its stated objectives.

Ethical Considerations

The desired ethical level for this study is high. All participants will give their voluntary consent and will always be made aware of the purpose of the study, the roles they are expected to fulfill in the study, as well as their freedom to pull out of the study at any one time. The data collected by the participants will be anonymized, thus minimizing the chances of identification and possible retribution. Another important factor that should not be overlooked is the biases in the data collection and analysis process. In order to reduce the influence of researcher bias, triangulation methods shall be employed, thus comparing data from interviews and focus groups to ensure that they give similar results. Also, the role of the researcher in carrying out the research will be recognized through reflexivity, which will be operationalized (Patton, 2015). This allows the study to avoid bias and gain credibility.

IV. Results

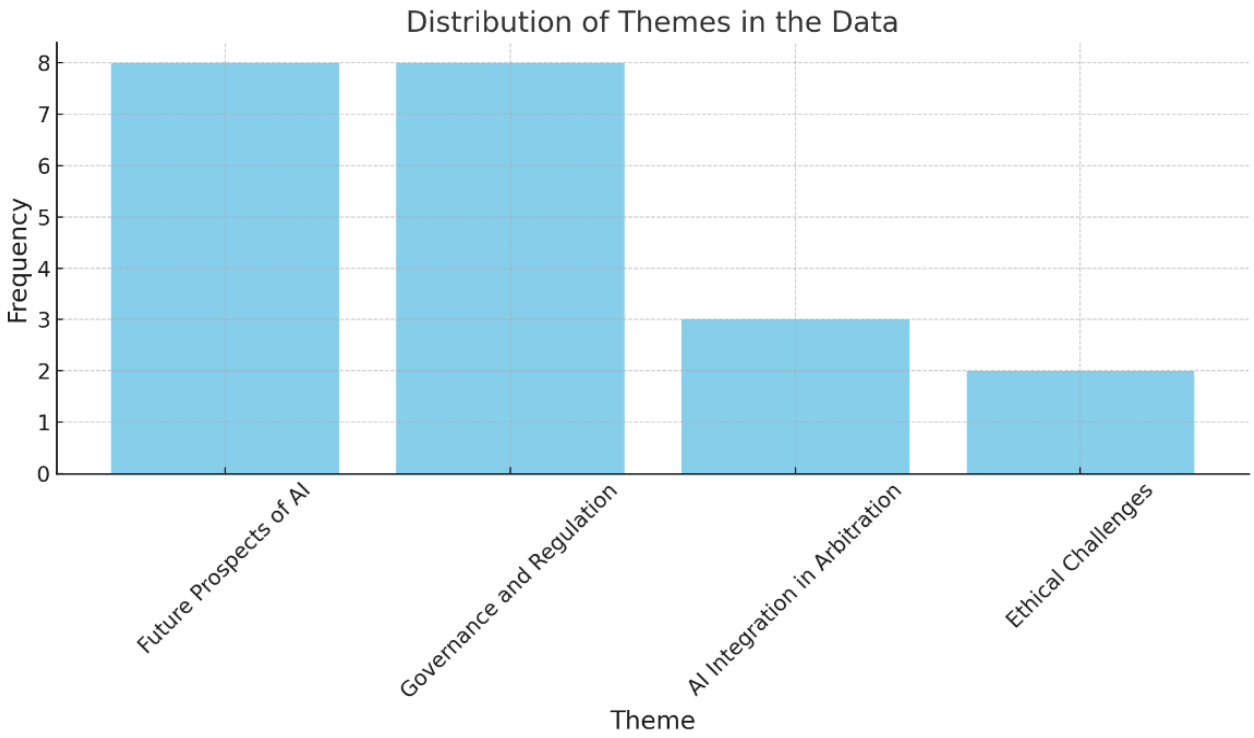
Themes Extraction

The frequency table and bar graph revealed four central themes:

1. Future Prospects of AI (8 mentions): The AI optimism theme, which is the most mentioned in the nominated works, reflects the potential of changing the latter through using Artificial Intelligence solutions. Some of the participants highlighted that AI systems are contextual to cultural and legal systems, a sign of the participants looking at the future of technology.
2. Governance and Regulation (8 mentions): Equally heard was the insistence on the call and the role of regulations and diplomacy to deal with the jurisdiction issues and give a face to accountability.
3. AI Integration in Arbitration (3 mentions): Some of the modern uses of AI in arbitration that participants mentioned include using it in document reviews. Some of the drawbacks include the inability to handle human-related issues.
4. Ethical Challenges (2 mentions): Issues examined included self-expression and disclosure, bias, and accountability, perceived to be imperative when implementing AI.

5. Table 1 Themes Frequency

Theme	**Frequency**	
Future Prospects of AI	22	8
Governance and Regulation	19	8
AI Integration in Arbitration	11	7
Ethical Challenges	17	5



6. Figure 1 Themes Distribution

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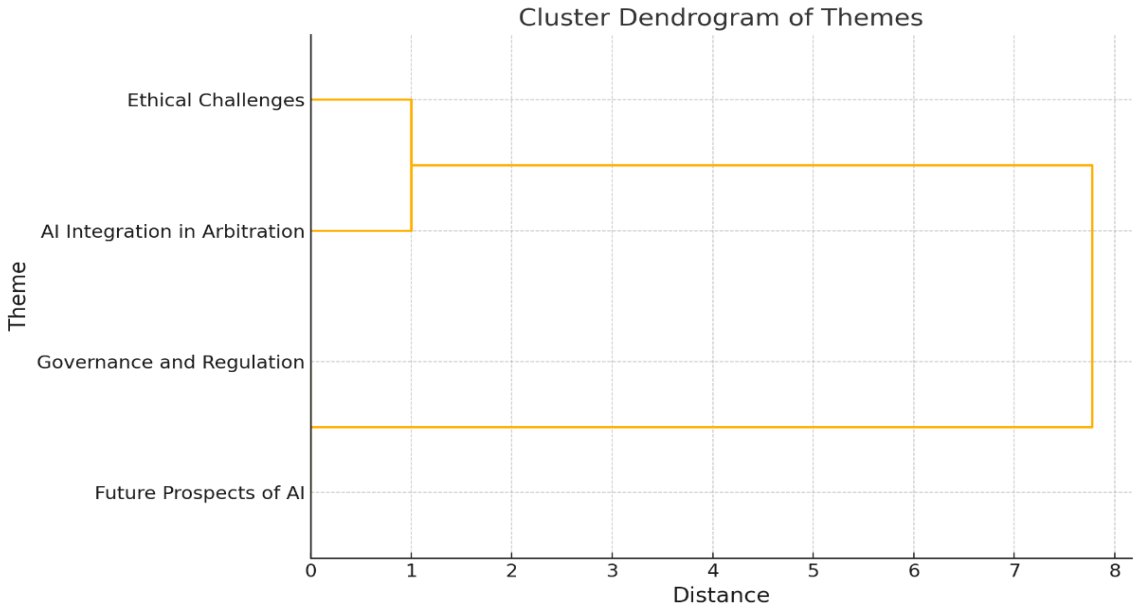
The cluster dendrogram highlighted the relationship between the applied theme and the future of AI's governance and regulation and AI's limited operational capacity, with 'ethics issues' being an important concern in arbitration.

Table 2 Cluster Dendrogram



The prominent terms were identified using the word cloud Figure 02, which includes AI, dispute, resolution, and governance. These terms put into focus the importance of AI in the processes of disputing and the significance of governance agendas to preside over the integration well. Socio-ethical issues and stakeholders were also identified from words such as "transparency," "bias," and "accountability."

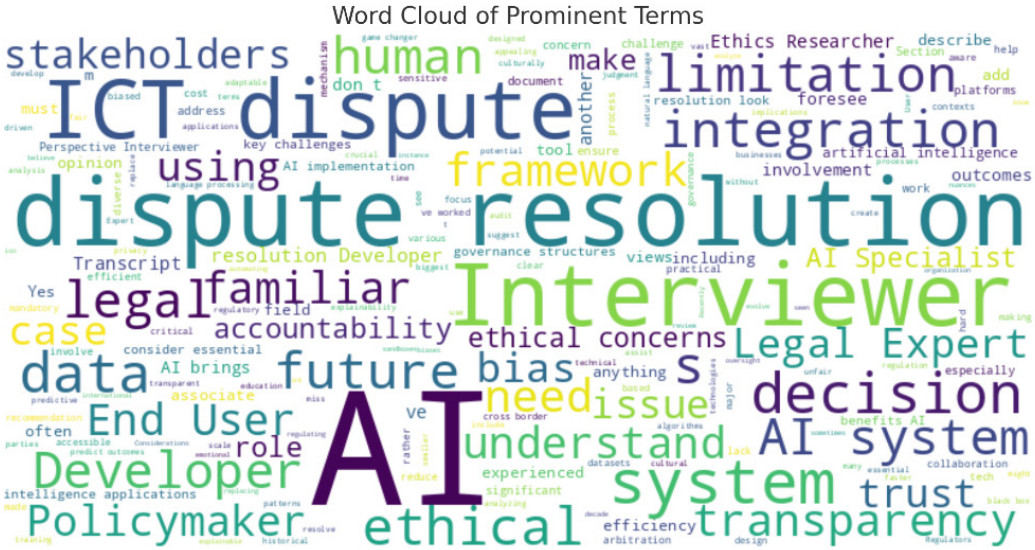


Figure 2 Key Terms Word Cloud

The node matrix diagram presented in Figure 03 provided weights to relationships between themes, expressing what authors called the strength of connectedness. Significant coupling was observed between the Future Prospects of AI and Governance and Regulation (W 3) and between Governance and Regulation and AI Integration in Arbitration (W 4), regarding governance as a critical factor for realising AI's potential.

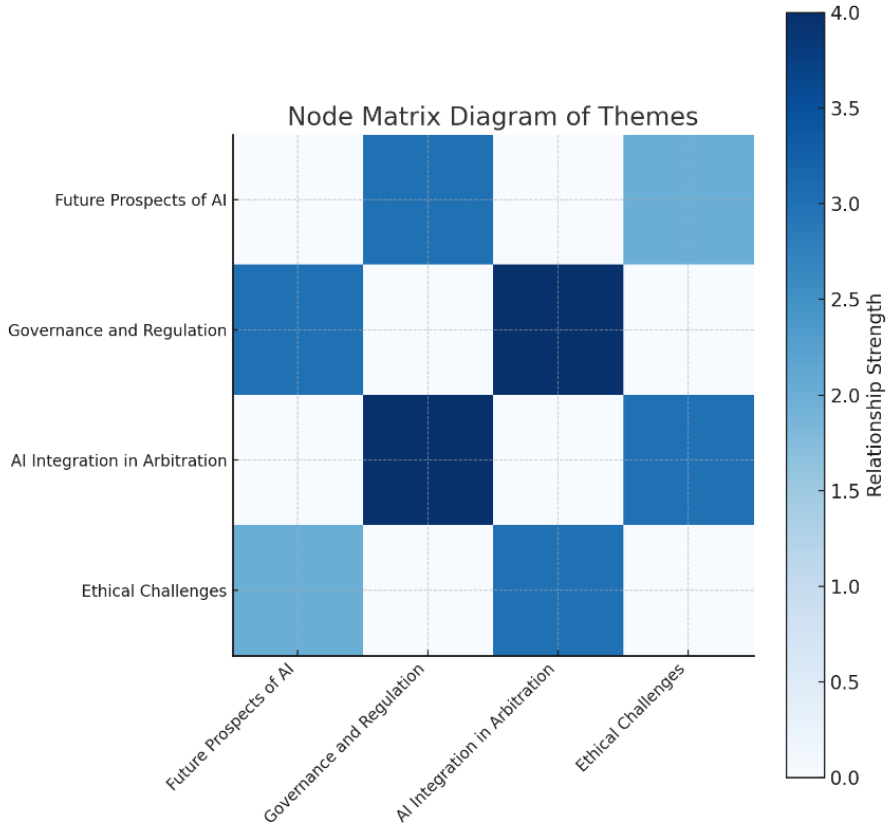


Figure 3 Node Diagram Matrix

Theme 01: AI in Arbitration

The use of AI in arbitration has also been identified as an important milestone, especially in relation to efficiency. Several times, participants mentioned that AI saves time as it can handle many reviews automatically.

One participant stated that using technology in document review helps cut expenses and save time when completing dispute resolution. This has been a real turning point for many cases." However, although the participants agreed to these practical advantages, they also discussed the challenges of AI within arbitration (Participant 6: accents by the author). The limitations were raised where AI failed to capture the emotional and contextual nuance commonly at the heart of cases.

One participant said this while arguing for the virtues of AI in conflict of interest claims: "The approach benefits from ignoring the dynamics of tension that such a conflict entails or demands." While it can clear the logics, it will do so at the expense of failing to address the concerns of the stakeholders. This was well echoed by some of the following participants in the study, who discerned their understanding of arbitration as not being a process that is only informed by logical processes. Some people wonder if the AI systems are too diverse to handle contentious and delicate issues within cultures or emotions. Cultural sensitivity or lack of emotion is important when dealing with this form of ADR. AI is not so advanced to interpret that deep. (Participant 5)

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Another issue that was pointed out under this theme involved biases imparted to an AI system. People provided examples where human-oriented programs, designed using biased algorithms, made decisions that were considered biased. In some instances, I discovered algorithms incorporated biased data to determine preferred results. Besides betraying the public ethic of trust, the practice also worsens existing inequality. While participants mentioned these challenges, they believed that AI could be beneficial if used in combination with human arbitrators. AI was proposed to take up mechanical responsibilities while human beings concentrated on relational and adjudicative work in arbitration. As people often say, the best things in life are complementary rather than competitive; the same applies in this case; AI is not an enemy but a partner. That is, it can rapidly consider massive quantities of information while sparing arbitrators time for handling the human side of a controversy." (Participant 8)

This theme points out that AI has a reserved but promising role in arbitration. They call for designs that include human judgment and stress how reduction to reliance on AI must have human control and supervision.

Theme 03: Ethical Challenges

Lack of ethical considerations became apparent as one of the transverse categories related to AI in ICT dispute systems. Opinions focus on the unrealistic guarantees from the AI-solutions, including trust, openness of the process, and fairness at every stage.

One participant said, 'Transparency is a big issue'. The problem is that when an AI recommends a decision, most stakeholders do not know how or why that decision was made. There was a concern that many of the AI systems were also non-transparent; this is what people refer to as the black box issue. Some people pointed out that without specific AI, stakeholders would not feel assured the system is indeed fair. Moreover, "It is impossible to build trust with people if they cannot understand how the AI comes up with a decision. AI ought to be explainable so that fairness as well as accountability can be maintained in the process." (Participant 3)

Accountability was another important ethical issue in this aspect. The authenticity of AI decisions was also an issue where participants were challenged as to who should be held liable for AI decisions that may be wrong or biased—the creators, the companies leveraging the solutions, or the third-party officials approving the decisions made by artificial methods. Another issue raised by the use of artificial intelligence is, 'when a mistake is made, who is responsible?' The above process raises the question of whether it is the organization, the developer, or the arbitrator who is at fault. This ambiguity has to be resolved for our governance frameworks to be truly effective." (Participant 7)

Bias in AI systems was also a regular theme. Several participants pointed out that even though it is seen as fair, AI, in many cases, actually incorporates prejudice from the data it is based on. The various choices made can continue to reproduce inequality in the system. Traditional machine learning methods are prejudiced by definition since an AI system is only as non-partisan as the training data it was given. If such bias is present in the data, then bias is also in decision-making and can be extremely dangerous." (Participant 6)

It is also important to note that the ethical concerns of the participants went beyond the day-to-day issues in the use of AI; there were questions of fairness regarding the use of AI in disputes. They criticized the use of AI for handling legal cases and feared that the use of AI would transform legal cases into a robotic process. 'Sure, let me ask you something?' They respond, 'What do you want me to do, build an AI that arbitrates?' No, I will build an AI that complements the human arbitration side." As Mr. Thompson aptly points out, "Fairness and empathy," he said, "are not things that you can program." (Participant 5)

To mitigate these ethical issues, participants called for the establishment of legal profession-specific ethical models. These frameworks should promote transparency, establish a culture of teaching to stakeholders, and, more importantly, feature constant surveillance of the AI systems. "Education is critical. It is, therefore, important for stakeholders to develop knowledge of the capabilities and drawbacks of implementing AI for efficient and appropriate applications. Participants also suggested that other autonomous committees should be set to check for bias within AI frameworks. Audits can be of good use in making certain that ethically and legally compliant prices are installed with an AI system. Apart from this, it is nearly impossible to point out anyone as being at fault." (Participant 4)

The ethics discussion embrace the accommodating claim for the appropriate and considerate integration of AI. Perceived benefits of AI by participants are related to

supporting elements that indicate a need for amicable dispute resolution, which should not undermine fairness, transparency, or accountability.

Theme 03: Governance and Regulations

As may be expected, the themes of growth and the future of AI are tied to the issue of governance and regulation, an issue that will be explored throughout the book. Participants emphasized the need to have strong measures that would enhance the right implementation of the use of AI in ICT dispute resolution.

"Governance is critical. That is why I believe that all AI-based disputes, including the ones that deal with sensitive issues, should be supervised by people. (Participant 2). One of the points that all participants noted is the issue of transparency and accountability. They noted that although AI can bring improvement in efficiency, they argued that the lack of transparency in AI gives rise to the question of trust and fairness. Also, another participant said, "If an AI decision is unfair, who is to blame, the developers or the organization that deployed the tool?" We have consistent calls for better and more grounded accountability systems. This concern is in line with general worry about artificial intelligence, where the judgment is even unknown to developers in most cases. To address this, participants suggested creating explainable AI systems: If there is one thing that we should never compromise, it is transparency. If the stakeholders do not comprehend how a certain decision was arrived at, then this trust in AI will decline. Hence, the future is Explainable AI. (Participant 6)

Another significant element of governance is international relations. It was noted that ICT disputes do not necessarily respect geographical borders because the discussed technologies function in the global sphere. They proposed that regulation should be standardized across the participating countries to make it fair. ' Many disputes straddle the borders of civil and criminal jurisdictions and, therefore, require inter-n butt joint activity.' What we require are regulatory sandboxes where AI tools can be allowed to experiment in safe, legal environments. Participant 5: For instance, such sandboxes would help the developers and the policymakers to test some of the AI technologies in a sandbox setting with a view of gauging the future dangers as well. One participant elaborated:

Moreover, one of the participants emphasized that "Regulation isn't enough." We require environments that are used to identify biases and issues affecting the operation of AI systems. These sandboxes could help protect against adverse side effects." The participants also felt the need for education regarding the governance of a country. They observed that judges, lawyers, and end-users need to know what AI can do and what it cannot do.

Education is important was mentioned by one participant. This means that it will be impossible for stakeholders to oversee the use of AI or believe in decisions made by the technology if they are not privy to how it is created. Thus, there is an overall read: governance is not just about putting constraints but fostering a system for the sustainable, ethical use of AI. This entails hefty existing standards, formidable cooperation from other countries, and the involvement of all the stakeholders. Also, another participant adds that what one needs to see in the current world of governance is how to unleash this AI power while managing it. This calls for a synergy of the technologist, the policymakers, and the legal counsel.

Theme 04: Future Prospects of AI

One of the overarching themes that emerged from the data was a positive attitude towards the prospect of AI in ICT dispute resolution. Specifically, all the participants recognized a positive impact of AI that can change the overall effectiveness and accessibility of legal activities.

One of the participants stated that AI can transform ICT dispute resolution; however, the argument is that it should be done prudently. It is about optimization: using what technology offers without disregarding justice and people. (Participant 3) In addition, another participant stated that it reflects a broader sentiment: As crowdsourcing is perceived not only as an efficient instrument for reducing costs but as an effective tool extending AI abilities, participants claim that it has to be just. One participant captured this duality succinctly:

Similarly, another participant summed up nicely that "I feel AI should be seen more like an assistant to the decision-making process rather than being the decision maker itself." What is required is the distinct design of AI systems to work in different cultures and under different laws and regs. For instance, another participant further pointed out that flexibility was often raised as a requirement for AI systems in conflict resolution. Data was shared with the participants about the different laws around the world and the need for AI to be able to take into account variations in these laws. This sensitivity is not merely technical but cultural too; one of the participants said, 'What interests

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me is that AI is trained to recognize and learn various legal systems.' If we are able to do this, AI has the potential to be the rallying point in the settlement of disputes across the world. (Participant 5)

Similarly, participants raised several concerns regarding both overdependence on technology and overstating the abilities of AI as a replacement for human input and judgment. The future for AI is promising, though dependent on a system incorporating equity and a human overseer because: 'It may get through the facts of a case quicker than any lawyer, but it cannot deal with the interrelated issues and feelings of disputes.' They further add that "This is where human judgment is still completely indispensable." Continued advancements in the field form part of the prospects of AI in the future, considering the present challenges that incorporate bias and explainability. "The technology can become a comforting mediator if we are willing to continue its refinement and untangle prejudice built into the AI system." (Participant 4) This theme may be summed up as a vision of AI as an agent of justice as opposed to an agent of disruption if the problems that have been outlined in this paper are properly addressed.

V. Discussion

The present study effectively explored the interaction between AI and ICT in the process of dispute resolution while managing ethical issues, governance, and socio-technical impediments. Its objectives are relevant; it focuses on stakeholder's perceptions and presents a framework for the ethical application of artificial intelligence. However, when doing qualitative research, thematic analysis, and stakeholder interviews, to be specific, the study could improve its validity by using quantitative data. Furthermore, the use of semi-structured interviews might bring about subjectivity, and this could be reduced through proper sample diversity and research properties. By covering legal, ethical, and technical aspects of the problem, it guarantees its relevance to the field.

Ethical issues of the use of AI in ICT for dispute resolution are some of the issues of focus in the study. People expressed substantial concerns that upheld the 'black box' problem that negates public confidence in legal decisions made with the application of artificial intelligence. This concern resonates with Shneiderman (2020) and Yeung et al. (2020), arguing that non-s explainable AI lowers confidence in legal systems. Additionally, the problem of bias traced back to the training sample, as discussed by Belenguer (Belenguer, 2022), deepens today's injustices in AI decisions, explaining the necessity to improve data equity further. Of course, the study raises those ethical questions and begins to approach them, but it fails to wholly tap into solutions like explainable AI and particularly transparent governing structures that are paramount when it comes to building trust and meaningful accountability for AI, as Gahnberg discusses (Gahnberg, 2021).

The study also highlights areas in which AI can be implemented in dispute resolution workflows, specifically document processing and case prediction. This is in agreement with Iuga Iuga (2024) and Roche et al. (Roche et al., 2022), who later demonstrated that time and costs can be greatly reduced by using AI in arbitration. However, the issues concerning the inability to deal with context-related peculiarities, particularly in culturally sensitive issues, continue to be alarming. These limitations are discussed in the study itself; however, drawing on Aizenberg and Hoven (Aizenberg & Hoven, 2020), the study could address how advanced coaction of AI and humans in complex cases might improve the efficiency of dispute resolution.

Governance and regulation are also other categories of findings that are considered to be important in the study. All the respondents noted that proper governance structures were crucial in the management of AI. This sentiment is shared with Buhmann and Fieseler Buhmann & Fieseler (2022) and Adelekan Adelekan (2024) to encourage collaboration with foreign countries in order to harmonize the regulation of AI. The notion of "regulatory sandboxes" described in the course of the study mentioned above is another perspective direction in the development of AI-related experimentation and testing in a protected environment. However, the research does not offer a critical assessment of the extant regulatory models and possibilities for their application in another jurisdiction, as Corea et al. have done (Corea et al., 2022).

Other appealing dimensions include the sociotechnical effects and the perceptions of the stakeholders. The thematic analysis portrays the apprehensions of users regarding the applications of AI as a substitute for human reasoning and social applications of AI, as highlighted by Chen Chen (2024) and Dexe and Franke (Dexe & Franke, 2020). Yeung et al. (Yeung et al., 2020) also have backed the notion of harmony between humans and AI by incorporating human supervision into Machines. Still, it could use expanding on the understanding of how training and education of the different stakeholders can prevent resistance to AI implementation, as Wong et al. pointed out (Dexe & Franke, 2020).

Lastly, although the study provides concepts for AI implementation that are ethical, the ethical frameworks offered are ambiguous. Some of the remarks that arose include a need for regular review of the use of AI and engaging the stakeholders in learning about AI in agreement with Gahnberg (Gahnberg, 2021). The integration of the "ethical switch" model suggested by Nweke Aizenberg & Hoven (2020) may introduce a dynamic perspective to enshrine ethical deliberation into AI models, which would add more value to the study regarding ethical AI.

The present research contributes centrally to the theory and practice of the consortium member organizations by identifying and analyzing the ethical, governance, and socio-technical ramifications of ICT AI-mediated dispute resolution. It underlines stakeholder-oriented approaches and has put forward theoretical as well as practical frameworks to address ethical AI in the current literature. However, the findings of the qualitative focus could be extended with quantitative data for more generalisability. The insights derived from the study provide helpful recommendations susceptible to legislators and jurists, including the idea of promoting AI transparency, establishing effective governance, and sharing global efforts. The study contributes to the extant literature by proposing that the education of the stakeholders contributes to the responsible adoption of AI with an emphasis on legal structures.

VI. Conclusion

This study systematically reviews the application of AI in ICT dispute systems, noting its capacity to improve dispute processing efficiency and various critical ethical, governance, and socio-technical issues associated with its use in this context. In line with this approach, the research puts forth the following multidimensional themes: ethics and governance, from a nuanced perspective of stakeholders, noting the need for standards and governance, as well as human moderation of artificial intelligence. The simulations stress the need for more effective international regulations and increased awareness of the common stakeholders involved. This study also demonstrated that AI presents numerous possibilities, but it should start as a fair, culturally, and legally sensitive technology. Thus, this research provides important insights for furthering AI implementation based on ethical considerations in the current context of legal disputes.

VII. Recommendations

To ensure the responsible and effective integration of AI in ICT dispute resolution, the following actionable recommendations are proposed:

AI Transparency and Explainability: The users of explainable AI should be able to understand the process of decision-making done by machine intelligence, so developers and stakeholders should focus on creating this kind of farewell system. Other advanced architectures include explainable artificial intelligence, which, when put into practice, can improve trust and accountability. Control checks must assess system openness to identify compliance with ethical benchmarks.

Build Sound Governance Structures: Policymakers should establish generic codes of regulations for accountability, bias, and liability. These frameworks should have definite roles for those who build AI, those who deploy it, and those who utilize it. International regulatory sandboxes set by different countries can allow for the safe testing of new AI use cases while solving issues with varying regulations across the countries.

Implement People Controls in AI Processes: The AI system should always work and act as the assistant to human decisions and should not specifically override human decisions. Thus, imposed processes should be controlled by legal practitioners while using AI to ensure compliance with the requirements of ethical standards and focus on the context. This balance will ensure that risks that may be occasioned by fully automated decision-making will be checked.

Launch Stakeholder Engagement and Education: Continuous professional training education for judges, lawyers, and policymakers should be conducted to enhance their knowledge about the capability and limitations of AI in various functions. This is because awareness campaigns put people in the spotlight and make them understand more about certain AI technologies, which in turn makes them accept AI technologies more easily.

Address Algorithmic Bias: AI developers have to use diverse and high-quality data sets as a training basis to exclude bias. It is clear that without periodic evaluation and third-party audits, discriminatory trends are likely to

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be seen, hence promoting equity.

Support Ethical Standards and Ongoing Screening: Certain principles of AI in relation to the conflict-solving process should be formulated as ethical standards. New-generation ethics committees should oversee AI practices to ensure legal and ethical compliance with their use.
The above recommendations offer a framework to guide the implementation of AI into ICT dispute resolution and protect its fairness, transparency, and accountability.

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