



Digital Legislator: A Case Study on the Role of Artificial Intelligence in the Legislative Process of the United Arab Emirates

Didi Jubaidi^{1*}, Khoirunnisa Khoirunnisa²

^{1,2}Universitas 17 Agustus 1945 Jakarta, Indonesia

Jl. Sunter Permai Raya, North Jakarta, 14350

Author Correspondence: didijubaidi@gmail.com

Abstract. *The rapid advancement of Artificial Intelligence (AI) is reshaping public governance, including legislative processes. In the United Arab Emirates (UAE), AI is being actively utilized to enhance law-making through faster drafting, improved consistency, and greater transparency. This study examines the role of AI in the UAE's legislative functions, focusing on how AI tools assist in analyzing legal data, formulating policy recommendations, and drafting legislation. It explores how AI impacts the speed, accuracy, and legitimacy of law-making, while also addressing the ethical and legal challenges of delegating legislative tasks to intelligent systems. Using a qualitative case study method, the paper evaluates government initiatives, expert insights, and regulatory structures that frame AI's integration into the UAE's law-making system. While AI offers opportunities for data-driven governance and increased legislative productivity, it also presents risks such as algorithmic bias, reduced human oversight, and accountability gaps. The study emphasizes that AI must be governed by strong regulatory frameworks to safeguard democratic values, fairness, and legal integrity. By analyzing a pioneering national model, this research contributes to global discussions on AI in governance and offers key insights for policymakers, technologists, and legal scholars seeking to balance innovation with ethical and legal standards.*

Keywords: AI Governance, Algorithmic Accountability, Artificial Intelligence, Legislative Innovation, UAE Legal System

Abstrak. *Kemajuan pesat Kecerdasan Buatan (Artificial Intelligence/AI) tengah membentuk ulang tata kelola publik, termasuk proses legislasi. Di Uni Emirat Arab (UEA), AI secara aktif dimanfaatkan untuk meningkatkan pembuatan undang-undang melalui perancangan yang lebih cepat, konsistensi yang lebih baik, dan transparansi yang lebih tinggi. Studi ini mengkaji peran AI dalam fungsi legislatif UEA, dengan fokus pada bagaimana alat-alat AI membantu dalam menganalisis data hukum, merumuskan rekomendasi kebijakan, dan menyusun rancangan perundang-undangan. Studi ini mengeksplorasi bagaimana AI memengaruhi kecepatan, akurasi, dan legitimasi proses legislasi, sekaligus membahas tantangan etis dan hukum dari pelimpahan tugas legislasi kepada sistem cerdas. Dengan menggunakan metode studi kasus kualitatif, makalah ini mengevaluasi inisiatif pemerintah, pandangan para ahli, dan struktur regulasi yang membingkai integrasi AI ke dalam sistem pembuatan hukum di UEA. Meskipun AI menawarkan peluang untuk tata kelola berbasis data dan peningkatan produktivitas legislasi, AI juga menimbulkan risiko seperti bias algoritmik, berkurangnya pengawasan manusia, dan kesenjangan akuntabilitas. Studi ini menekankan bahwa penggunaan AI harus diatur oleh kerangka regulasi yang kuat untuk menjaga nilai-nilai demokrasi, keadilan, dan integritas hukum. Dengan menganalisis model nasional yang bersifat pionir, riset ini memberikan kontribusi terhadap diskusi global mengenai AI dalam tata kelola, serta menawarkan wawasan penting bagi para pembuat kebijakan, teknolog, dan akademisi hukum yang berupaya menyeimbangkan inovasi dengan standar etika dan hukum.*

Kata kunci: Akuntabilitas Algoritmik, Inovasi Legislasi, Kecerdasan Buatan, Sistem Hukum UEA, Tata Kelola AI

1. INTRODUCTION

In recent years, the United Arab Emirates (UAE) has emerged as a global leader in the integration of cutting-edge technology within its public governance structures. One of the most pioneering developments is the application of Artificial Intelligence (AI) in the legislative process. Driven by its national vision to become a leading digital government, the UAE has embraced AI to streamline and modernize law-making activities ranging from the drafting of

legislation to the analysis of legal data. This transformation seeks to enhance legislative efficiency, reduce policy-making time, and ensure greater transparency and accountability.

The motivation behind this study lies in the growing global interest in how AI can support the evolving demands of legislative institutions in the digital era. The UAE offers a unique case where AI is not merely used for legal administration, but plays an active role in shaping the formulation of laws. This raises important questions about the impact of AI on legislative quality, the speed and legitimacy of the law-making process, and the new challenges it introduces concerning ethical governance and accountability.

A key example of this innovation is the UAE's establishment of the Regulatory Intelligence Office, which employs AI systems to automate legal drafting and policy analysis, reportedly reducing policy formulation time by up to 70% (Financial Times, 2025). Such initiatives reflect the country's ambition to create a "digital legislator" framework, where AI augments the capabilities of human policymakers. However, while the benefits are notable, this also provokes serious debate about the limits of machine involvement in rule-making, especially when legislative outcomes affect fundamental rights and social justice.

The implementation of AI in legislation carries substantial potential for improving law-making. In the UAE, AI has been applied to process large volumes of legal texts, detect inconsistencies, and even generate drafts of proposed laws. These capabilities not only accelerate the legislative cycle but also reduce human error and resource consumption. However, significant risks remain. One of the most pressing concerns is algorithmic bias, which can distort legislative priorities if AI systems are trained on unbalanced or incomplete data sets. Moreover, the delegation of legal reasoning to AI raises difficult questions about transparency, human oversight, and democratic legitimacy.

Academic studies support these concerns. For instance, Carvão et al. (2025) introduced a dynamic governance model emphasizing continuous human involvement to mitigate AI's impact on fairness and inclusiveness in law-making. Similarly, Starke & Lünich (2020) warned of a potential erosion in public accountability as AI systems assume a larger role in political and legal decisions. These studies underline the importance of a regulated and ethically grounded approach to AI integration in the legislative domain.

This research applies two main theoretical lenses: the theory of legal technology and algorithmic ethics. The former explores how law and legal institutions evolve in response to digital transformation, while the latter critically assesses the ethical obligations inherent in AI system design and deployment particularly fairness, transparency, and accountability.

Together, these frameworks allow for a comprehensive analysis of AI's dual role as both a tool and a policymaker within the legislative process.

In the UAE, this transformation is part of a broader vision to construct a governance ecosystem powered by data, automation, and smart technologies. This paper investigates how AI is being utilized in legislative functions within the UAE, evaluating both the efficiency gains and the ethical complexities that arise. Furthermore, the findings are positioned to provide guidance for other countries—such as Indonesia—that may be considering similar AI-based reforms in their law-making systems.

Methodologically, this study employs a qualitative approach centered on a case study of AI application in the UAE's legislative system. Data are drawn from academic literature, government publications, institutional reports, and media sources. The analysis focuses on the structure and function of AI within legislative workflows, with special attention to ethical, procedural, and institutional considerations.

Literature Review

The incorporation of Artificial Intelligence (AI) into legal and legislative systems has become a prominent subject of scholarly inquiry, particularly as governments seek to modernize governance frameworks in the digital era. Research in this field largely explores the duality of AI's promise: its potential to improve efficiency and accuracy in legal processes, and its concomitant ethical, procedural, and institutional risks.

One foundational contribution comes from Carvão et al. (2025), who propose a *dynamic governance model* to guide the ethical use of AI in policy-making. Their work suggests that AI can accelerate legislative functions by processing large volumes of data to support policy design, ultimately enhancing transparency and institutional responsiveness. However, this study remains largely conceptual. It proposes mechanisms for maintaining accountability but lacks empirical validation, particularly in the context of diverse and non-Western legal systems. As such, its practical applicability to cases like the UAE remains uncertain and underexplored.

Complementing this discussion, Starke & Lünich (2020) provide a critical lens on AI's influence over democratic decision-making. Their analysis underscores the risks of delegating public policy decisions to opaque algorithmic systems, particularly the erosion of human oversight and accountability. They emphasize that while AI can improve procedural efficiency, it may simultaneously compromise democratic values such as inclusiveness and fairness, especially if regulatory safeguards are weak or absent. However, their study primarily examines liberal democracies in the West, with little attention to how these concerns translate into hybrid or centralized governance systems like that of the UAE.

Offering a more region-specific perspective, Akhoirshieda et al. (2024) explores the deployment of AI in Middle Eastern legal systems, with a dedicated focus on the UAE. His research acknowledges the UAE's leadership in AI-driven legal reform, especially in areas such as legal research automation, case management, and policy drafting. Akhoirshieda highlights the government's effort to build an agile and responsive legal framework through AI integration. Nevertheless, the study also flags unresolved issues surrounding algorithmic transparency, data governance, and the absence of robust ethical oversight in legislative processes. While valuable, the analysis stops short of systematically evaluating the regulatory infrastructure needed to ensure that AI implementation remains aligned with the UAE's legal principles and socio-political values.

Collectively, the existing literature establishes an important foundation for understanding AI's theoretical potential and normative challenges in legal settings. However, significant gaps persist. First, most studies emphasize conceptual models without empirical application, particularly in non-Western and digitally ambitious states like the UAE. Second, little research has been conducted on how AI operates within the UAE's legislative context beyond administrative functions, especially regarding its role in policy formulation and law-making. Third, there remains limited comparative analysis of how the UAE's approach differs from or aligns with international best practices in AI governance.

This study aims to address these gaps by offering a focused case study on the UAE's use of AI in legislative processes. It explores how AI has been institutionalized within the country's regulatory architecture, the mechanisms through which it contributes to law-making efficiency, and the ethical risks that accompany this integration. The findings are intended to inform both scholarly debates and practical policymaking by identifying key lessons from the UAE's experience, and offering recommendations for countries, such as Indonesia that are considering similar digital transformations in their legislative systems.

2. THEORETICAL FRAMEWORK

To critically examine the application of Artificial Intelligence (AI) in the legislative processes of the United Arab Emirates (UAE), it is essential to adopt an interdisciplinary theoretical framework. This framework draws upon three interrelated domains: legal theory, AI governance, and AI ethics. Together, these theoretical lenses offer a structured approach to

understanding the evolving role of AI in law-making and its implications for legal systems rooted in both modern and traditional values.

AI and Legal Theory

Legal theory traditionally grapples with normative questions surrounding justice, fairness, legal reasoning, and the nature of law itself. The advent of AI in the legal domain challenges these foundational concepts by introducing automated, data-driven mechanisms into processes previously guided by human discretion and interpretive judgment. As noted by Susskind (2019), algorithmic legal tools such as those used in contract analysis, predictive adjudication, and regulatory drafting represent a paradigm shift in legal reasoning.

This shift raises questions about the compatibility of AI with jurisprudential traditions such as legal positivism, which conceptualizes law as a set of codified rules applied by neutral adjudicators. When AI systems perform quasi-judicial functions, the human element in interpretation, particularly the role of moral reasoning or contextual understanding, may be diminished. Applying this lens to the UAE allows us to interrogate how AI reshapes legal authority and whether its integration disrupts established understandings of justice and procedural fairness within a system that also incorporates elements of Sharia and civil law.

AI Governance in Legal Systems

The concept of AI governance refers to the institutional, regulatory, and normative frameworks that guide the design, development, deployment, and oversight of AI technologies. In the context of legal systems, effective AI governance ensures that technological interventions align with legal standards, democratic values, and human rights (Eubanks, 2018).

Key principles within this domain include transparency, accountability, and non-discrimination. Transparent AI systems must provide explanations for their outputs; accountable systems must allow for human review and correction; and non-discrimination requires that algorithmic decisions do not replicate or exacerbate social biases. In applying this theory to the UAE, one must assess how governance mechanisms—both domestic and international can safeguard legal integrity while enabling innovation. Given the centralized and rapidly digitized nature of governance in the UAE, questions emerge about who bears responsibility for AI-driven decisions in legislative contexts and how such systems can remain subject to public oversight.

Ethics of AI in the Legal Domain

The ethical dimension of AI use in the legal field interrogates whether the deployment of such systems adheres to societal principles of justice, fairness, and human dignity. Scholars such as Brožek et al (20 24) argue that legal AI must not only perform accurately but also

operate within ethically sound boundaries. Critical here is the principle of algorithmic fairness, which demands that AI systems be rigorously evaluated for potential bias, especially when they are used in contexts that affect fundamental rights.

This concern is particularly salient in jurisdictions like the UAE, where the coexistence of civil, common, and Islamic legal traditions requires careful ethical calibration. AI systems must be sensitive not only to general legal standards but also to the religious and cultural values embedded in the UAE's legal identity. The risk of ethical misalignment whether through the imposition of foreign-designed algorithms or through the lack of inclusive datasets must be addressed to prevent techno-legal outcomes that contradict prevailing legal and moral norms.

This theoretical framework synthesizes insights from legal theory, AI governance, and AI ethics to offer a multidimensional lens for analyzing the role of AI in the legislative processes of the UAE. It allows for a critical assessment of how AI challenges conventional legal norms, the institutional requirements necessary to govern AI responsibly, and the ethical constraints that must shape its development and application. By grounding the study in these three perspectives, the framework supports a nuanced understanding of both the transformative potential and the inherent risks of AI in shaping the future of law-making in the UAE.

3. METHODOLOGY

This study adopts a qualitative research approach using a case study method to explore the application of Artificial Intelligence (AI) within the legal system of the United Arab Emirates (UAE). A qualitative design is particularly well-suited to examining the multifaceted nature of AI integration in law, which intersects legal, technological, and ethical domains. The UAE has been selected as the primary case due to its prominent role in adopting advanced technologies within governance, demonstrated through initiatives such as the UAE Artificial Intelligence Strategy 2031 and the Smart Dubai program. The study focuses on examining the implementation of AI technologies in legal institutions—such as AI-driven judicial systems and legal research tools—to understand how these innovations affect legal processes, judicial efficiency, and the broader legal framework.

Data collection in this research involves two primary methods: document analysis and semi-structured interviews (Jubaidi & Khoirunnisa, 2024). The document analysis comprises a review of official government reports, legal regulations, national AI strategies, and relevant judicial decisions that illustrate the role and impact of AI in the UAE legal system. This approach enables a comprehensive assessment of the current regulatory and operational

landscape. Complementing this, semi-structured interviews will be conducted with legal practitioners, AI experts, and policy-makers based in the UAE. These interviews aim to gather nuanced insights regarding the real-world challenges and benefits of AI deployment in legal settings. Interview questions will focus on issues such as the influence of AI on legal decision-making, concerns regarding algorithmic transparency and accountability, and the adequacy of existing regulatory measures.

Thematic analysis will be employed to analyze the collected qualitative data. This method, as proposed by Khoirunnisa et al (2025), is effective in identifying recurring themes, patterns, and categories that emerge from the data. The analysis will be guided by the theoretical framework established in this study, encompassing perspectives from legal theory, AI governance, and AI ethics. Furthermore, a comparative element will be introduced by examining parallel AI implementations in other jurisdictions such as the United Kingdom or Estonia to contextualize the UAE's approach and derive comparative insights into best practices and regulatory effectiveness.

Ethical considerations are central to this study. All participants involved in interviews will be provided with informed consent forms, and their participation will be voluntary. Confidentiality and anonymity will be strictly maintained, and all data will be handled in accordance with established ethical standards for qualitative research. Moreover, the study remains sensitive to the legal and cultural context of the UAE, ensuring that the findings and interpretations respect the country's unique legal traditions, including its foundation in both civil law and Sharia principles. Through this rigorous methodological design, the study seeks to generate a comprehensive and contextually grounded understanding of how AI is reshaping the legal system in the UAE.

4. RESULT & DISCUSSION

The integration of Artificial Intelligence (AI) in the legal system of the United Arab Emirates (UAE) represents a significant shift in the way legal services and judicial processes are conducted. This development aligns with the UAE's broader strategy to position itself as a leader in technological innovation, including the UAE Artificial Intelligence Strategy 2031 (Artificial Intelligence Office UEA, 2021). This strategy aims to enhance government efficiency, provide better services, and incorporate AI into legal and judicial decision-making. In this discussion, we explore the potential benefits, challenges, and risks associated with AI's implementation in the UAE's legal system, as well as the regulatory and ethical considerations that must be addressed.

Benefits of AI Integration in the Legal System

The integration of Artificial Intelligence (AI) into the legal system of the UAE offers several substantial benefits, particularly in improving efficiency and accessibility (Hassouni & Mellor, 2025). The UAE has taken significant steps toward modernizing its judicial processes, with Dubai Courts being one of the pioneering institutions in implementing AI-driven systems for case management, legal research, and decision-making. By automating these processes, AI allows for quicker processing of legal data, enabling courts to handle higher case volumes in a shorter time frame (Eboigbe, 2023). This results in a reduction of backlogs and delays, which have traditionally plagued many legal systems, particularly in busy jurisdictions like the UAE.

One of the most notable advantages of AI is its ability to process vast amounts of legal information at a speed and accuracy that far exceeds human capabilities. Legal professionals, including judges and lawyers, benefit from AI-powered tools that assist in research and case analysis, enabling them to find relevant precedents, statutes, and case law more efficiently (Susskind, 2019). These systems also help streamline the workflow of legal practitioners, reducing the time spent on tedious tasks such as document review and legal citation checks. This automation frees up valuable time for lawyers, allowing them to focus on more complex aspects of legal analysis and client consultation.

Furthermore, AI applications have the potential to enhance access to justice, particularly for individuals who might otherwise face barriers to legal representation. Legal services in the UAE can be expensive, making it difficult for underserved communities to seek professional legal assistance. AI-driven platforms, however, can make legal services more accessible by offering lower-cost or even free solutions. AI-powered chatbots, for example, can provide preliminary legal consultations, helping individuals better understand their legal rights and obligations without the need for expensive lawyer consultations (Eubanks, 2018). These tools have the potential to democratize legal information, ensuring that even those with limited financial means can access essential legal advice.

This alignment with broader social goals is part of the UAE's ongoing commitment to improving public services and ensuring equal access to justice. By leveraging AI to make legal services more efficient, transparent, and accessible, the UAE is working to provide fairer legal opportunities for all citizens and residents, regardless of their socio-economic background. AI, therefore, has the dual effect of enhancing the quality of legal services while promoting inclusivity and reducing the traditional barriers to justice.

In sum, the benefits of integrating AI into the UAE's legal system are clear. These technologies can streamline legal operations, reduce case backlogs, support more efficient legal research, and ensure that legal services become more widely available, particularly for those in underserved communities. As AI continues to evolve, its role in enhancing both the efficiency and accessibility of legal systems in the UAE is poised to expand, offering even greater potential to improve the legal landscape.

Challenges and Risks of AI in Legal Decision-Making

While the integration of AI into the legal system presents numerous benefits, it also introduces several significant challenges and risks, particularly in the context of legal decision-making (Min, 2023). One of the primary concerns is the issue of accountability for AI-driven decisions. Legal decisions, by their nature, can have profound consequences for individuals, impacting their lives in areas such as custody, sentencing, or civil disputes. In this context, the opacity of AI systems presents a critical challenge. Many AI models, especially those utilizing machine learning algorithms, function as "black boxes," where the reasoning behind decisions is not easily understood or accessible to human users (Brožek et al., 2024). This lack of transparency can create significant difficulties when attempting to review or challenge AI-generated decisions. In legal systems, where the integrity and fairness of decisions are paramount, individuals affected by such decisions may find it hard to trust outcomes that are based on algorithms whose logic is not fully disclosed or comprehended (Nasir, 2025).

The absence of clarity in the decision-making process raises serious questions about the fairness and reliability of AI systems. Without understanding how or why an AI system arrives at a particular decision, the public may feel that their legal rights are at risk. This perception can lead to a lack of confidence in the judicial system, especially if people believe that algorithms, rather than human judges, are making critical decisions that affect their lives (Fine et al., 2025). Thus, transparency becomes essential in AI integration, ensuring that AI systems can not only provide clear explanations for their outputs but also allow for the ability to audit and review their decision-making processes.

Another key concern in the use of AI within legal systems is the risk of algorithmic bias. AI systems often rely on large datasets to train their models, and these datasets may reflect biases present in historical data. In legal contexts, such data could include biased judicial rulings, historical legal decisions, or societal inequalities, which might then be unintentionally perpetuated in the outcomes produced by AI (Munifah, 2024). This creates a significant risk of exacerbating existing disparities within the legal system, particularly for minority or

marginalized communities. AI systems trained on biased data may replicate or even amplify these biases, resulting in unfair and discriminatory decisions.

The potential for AI to reproduce existing inequalities poses a particularly troubling risk in legal systems, where impartiality and fairness are core principles. For example, AI systems could unintentionally prioritize certain factors over others, or even overlook crucial context, leading to decisions that disadvantage already vulnerable populations. This issue is especially problematic when AI systems are used in areas such as sentencing, parole decisions, or immigration law, where the stakes for individuals are incredibly high. Ensuring that AI systems are free from bias is therefore critical to their successful and ethical integration into the legal system.

To address these challenges, it is essential that AI developers implement rigorous safeguards to minimize bias and enhance transparency in decision-making. Legal systems adopting AI technologies must also establish oversight mechanisms that ensure decisions made by AI are subject to human review and accountability. Without these measures, the risks associated with AI such as the lack of transparency and the potential for bias could undermine the fairness and credibility of the legal system as a whole (Munifah, 2024). Therefore, careful attention must be given to both the design of AI systems and the regulatory frameworks that govern their use to prevent these challenges from eroding public trust in the legal process.

Ethical and Regulatory Considerations

The integration of AI into the legal system raises substantial ethical questions, particularly surrounding the role of human judgment in legal decision-making. Legal scholars have long emphasized that while AI can undoubtedly enhance the efficiency of legal processes, it cannot replace the nuanced moral reasoning and empathy that human judges contribute to their decisions (Mohamed Ali Quteishat et al., 2024). This distinction is especially important in sensitive legal areas such as family law, criminal justice, and cases involving vulnerable individuals, where decisions often require a deep understanding of the human condition—emotions, relationships, and the social context of the parties involved. For example, in family law disputes, judges must navigate complex issues like child custody, parental rights, and the best interests of children, which demand more than just a legal analysis of facts and evidence. In these situations, human empathy, ethical considerations, and a capacity for moral judgment are irreplaceable, making it clear that AI's role should be complementary, not substitutive, in such contexts.

AI systems, by contrast, are highly effective in processing large volumes of legal data and identifying patterns within that data, but they lack the capacity to understand or consider the emotional, psychological, and social dynamics that influence legal outcomes (Kerdvibulvech, 2024). For instance, while AI can analyze legal precedents and statutes with impressive speed and accuracy, it cannot intuitively weigh the human stories behind each case, which are often pivotal in legal determinations. As AI continues to be incorporated into the legal process, it becomes increasingly important to carefully delineate the boundaries of AI's application, ensuring that decisions in sensitive matters still rely on human discretion and judgment. This raises fundamental ethical concerns about how much authority should be delegated to AI, particularly in cases where human well-being is at stake.

Beyond these ethical concerns, the regulatory framework governing AI in the legal system remains significantly underdeveloped in many jurisdictions, including the UAE (de Almeida et al., 2021). The rapid advancement of AI technology has outpaced legislative efforts to establish clear and comprehensive guidelines that govern its use (Pantanowitz et al., 2024). In the UAE, while there has been progress in developing AI-driven solutions for certain legal processes, the absence of robust and specific regulations leaves many questions unanswered, particularly concerning data privacy, algorithmic accountability, and transparency. As AI systems become increasingly involved in legal decisions, it is crucial that regulatory bodies address these concerns to ensure that AI technologies are used ethically and in accordance with national legal principles.

For the UAE, one of the challenges lies in ensuring that AI governance frameworks align with both its legal traditions such as Sharia law and modern, secular legal practices (Taufiqurrohman et al., 2024). The UAE has committed to becoming a leader in AI innovation, yet this ambition must be tempered with careful attention to legal and ethical standards that protect individuals' rights and ensure fairness in the judicial process. Key regulatory considerations include data privacy, as AI systems rely heavily on personal and sensitive data to train algorithms and generate outcomes. Safeguards must be established to prevent misuse of this data and to protect individuals' privacy rights, which may be particularly sensitive in the context of Islamic law.

Additionally, issues of algorithmic accountability are paramount. Given the complexity and opacity of many AI systems, it is essential that clear accountability mechanisms are put in place to ensure that legal decisions made by AI can be reviewed, challenged, and corrected when necessary (Chaudhary, 2024). Regulations should mandate transparency in AI decision-making, requiring that the processes and factors that lead to specific outcomes are clearly

documented and accessible to legal professionals and the public. This would help mitigate concerns about the "black-box" nature of many AI systems, where the logic behind decisions remains opaque to users and affected individuals.

Lastly, ensuring that AI-driven legal systems do not perpetuate bias is critical to maintaining the fairness and integrity of the legal process. AI systems are often trained on historical data, which can reflect and amplify existing social inequalities. Without proper oversight, AI systems could inadvertently discriminate against marginalized groups, undermining public trust in the legal system. Effective regulation is required to guard against these risks, promoting the ethical use of AI while ensuring that the legal system remains impartial and just.

AI becomes more integrated into the legal framework, the UAE must develop and implement comprehensive AI governance structures that not only encourage innovation but also ensure that these technologies are used in a way that respects ethical principles, protects individual rights, and aligns with both secular and religious legal norms. Developing such frameworks will be crucial in ensuring that AI can enhance the legal system without undermining its core values of fairness, accountability, and transparency.

The Role of Human Oversight

While AI offers transformative potential to the legal system, the consensus among legal experts is that human oversight remains indispensable. AI should be viewed as a tool that enhances human decision-making rather than replacing it entirely (Eubanks, 2018). The complex nature of legal proceedings where human values, ethical considerations, and societal impacts must be carefully weighed requires that legal professionals and judges retain ultimate responsibility for decisions made by AI systems.

AI's role in the legal system can be highly beneficial in tasks such as data analysis, case research, and predictive assessments, but these tasks are not the same as making final judgments on legal matters. For instance, AI can assist in reviewing vast amounts of legal documents or predicting potential case outcomes based on historical data, which can improve efficiency and speed in processing cases. However, AI lacks the ability to interpret the nuances of human behavior, cultural values, and the broader societal context that are often essential in legal decision-making. In family law or criminal justice, for example, the emotional and psychological dimensions of a case require human empathy and moral judgment, aspects of decision-making that AI is not equipped to handle.

As Susskind (2019) argues, while AI tools can provide valuable insights and assist in the more mechanical aspects of legal analysis, the final judgment should rest with human judges. These human decision-makers can take into account not only the technical details of a case but also the ethical and societal implications, ensuring that decisions are fair, just, and aligned with broader human values. Human oversight guarantees that AI serves as an augmentation of human decision-making, helping to mitigate the risks associated with over-reliance on technology and ensuring that decisions remain grounded in human judgment.

Moreover, human oversight in AI-driven legal processes fosters accountability. Judges and legal professionals must be able to explain, justify, and, if necessary, correct AI-driven decisions. Transparency in how AI systems are applied and how decisions are made must be ensured to maintain trust in the legal system. For example, when AI tools assist in contract analysis or predictive legal outcomes, human experts should review the results to ensure that the AI's recommendations align with both the letter of the law and ethical standards. If AI suggests a particular course of action that could have significant legal or societal consequences, human oversight ensures that this recommendation is properly scrutinized, contextualized, and, where necessary, corrected before any legal action is taken.

Incorporating human oversight in AI applications within the legal system also addresses concerns of fairness and bias. Since AI systems can only operate based on the data they are trained on, there is always a risk that they might perpetuate existing biases present in historical legal data. Human oversight provides a critical check against such biases, enabling legal professionals to identify and address any discriminatory outcomes generated by AI tools (Murikah et al., 2024). By ensuring that AI decisions are subject to human review, the legal system can better safeguard fairness and equality, fundamental tenets of justice.

W Bias and ethics of AI systems applied in auditing - A systematic review hile AI technologies can greatly enhance efficiency and accuracy in legal proceedings, the role of human oversight is essential in preserving the integrity, fairness, and ethical foundations of the legal system. AI should complement, rather than replace, human decision-making, ensuring that legal judgments reflect both technical expertise and human values. The integration of AI into legal systems must, therefore, be carefully balanced with robust human oversight to maintain the rule of law and protect individual rights.

5. CONCLUSION & RECOMMENDATIONS

The integration of AI into the legal system of the UAE offers significant potential, including enhanced efficiency, better access to justice, and improved decision-making support. AI can streamline legal processes, assist in case management, and provide valuable insights for legal research and analysis. However, the deployment of AI in the legal domain also presents substantial challenges, particularly with regard to transparency, bias, and ethical considerations.

One of the primary concerns is the transparency of AI-driven decisions. Many AI systems operate as "black boxes," where the reasoning behind decisions is not easily understood by humans, which could undermine public trust in the legal system. Furthermore, AI systems may unintentionally reinforce existing biases present in historical data, raising concerns about fairness and impartiality key principles of the legal system. Ethical dilemmas also arise regarding the extent to which AI should be involved in sensitive legal matters, where human discretion, empathy, and moral judgment are essential.

As the UAE continues to integrate AI technologies within its legal framework, it must address these challenges carefully to ensure that AI aligns with the country's legal, cultural, and ethical values. Developing a comprehensive regulatory framework that addresses issues such as data privacy, algorithmic accountability, and transparency will be crucial to maintaining the integrity of the legal system. Additionally, ensuring robust human oversight in the use of AI will be essential in balancing technological innovation with the protection of fundamental rights and the preservation of justice.

Ultimately, for AI to be successfully integrated into the UAE's legal system, it must be used in a way that is fair, accountable, and consistent with both national legal principles and international human rights standards. With the right governance and oversight mechanisms, AI has the potential to significantly enhance the UAE's legal system while upholding its core values of justice, fairness, and integrity.

RECOMMENDATIONS

To ensure that the integration of Artificial Intelligence (AI) into the legislative system of the United Arab Emirates (UAE) is both effective and responsible, several key recommendations should be considered:

First, the UAE government should develop a comprehensive and adaptive regulatory framework that not only addresses the technical aspects of AI implementation but also upholds national legal principles, including Sharia values and social justice.

Second, there should be active involvement of key stakeholders including legislators, legal experts, technologists, and civil society in shaping AI-related policies. This inclusive approach is essential to promote transparency, accountability, and prevent the concentration of decision-making power in opaque, unaccountable systems.

Third, human capacity-building must remain a priority. AI should serve as a tool to support not replace human judgment. Therefore, training programs for legal and legislative professionals on AI usage and oversight are crucial to prevent misuse and preserve the legitimacy of the legislative process.

Finally, the UAE has the potential to serve as a global model for AI-driven legislative innovation, provided it demonstrates that technological advancement can align with the protection of human rights and the rule of law. International collaboration on ethical standards and knowledge-sharing is highly recommended to support this vision.

REFERENCES

- Akhourshieda, M. S., Naim Ku Khalif, K. M., & Awang, S. (2024). Artificial Intelligence In The United Arab Emirates Public Sector: A Systematic Literature Review. *IAES International Journal of Artificial Intelligence*, 13(3), 2472–2481. <https://doi.org/10.11591/ijai.v13.i3.pp2472-2481>
- Artificial Intelligence Office UEA. (2021). *U.A.E Ministry for Artificial Intelligence 2031*. <https://ai.gov.ae/wp-content/uploads/2021/07/UAE-National-Strategy-for-Artificial-Intelligence-2031.pdf>
- Brożek, B., Furman, M., Jakubiec, M., & Kucharzyk, B. (2024). The Black Box Problem Revisited. Real And Imaginary Challenges For Automated Legal Decision Making. *Artificial Intelligence and Law*, 32(2), 427–440. <https://doi.org/10.1007/s10506-023-09356-9>
- Carvão, P., Atir, Y., & Ancheva, S. (2025). *A dynamic governance model for AI*. Lawfare. <https://www.lawfaremedia.org/article/a-dynamic-governance-model-for-ai>
- Chaudhary, G. (2024). Unveiling the Black Box: Bringing Algorithmic Transparency to AI. *Masaryk University Journal of Law and Technology*, 18(1), 93–122. <https://doi.org/10.5817/MUJLT2024-1-4>
- de Almeida, P. G. R., dos Santos, C. D., & Farias, J. S. (2021). Artificial Intelligence Regulation: a framework for governance. *Ethics and Information Technology*, 23(3), 505–525. <https://doi.org/10.1007/s10676-021-09593-z>
- Eboigbe, E. O. (2023). AI IN LEGAL ANALYTICS: BALANCING EFFICIENCY,

ACCURACY, AND ETHICS IN CONTRACT AND PREDICTIVE ANALYSIS.

SSRN, 29(1980), 1–26. <https://doi.org/10.2139/ssrn.4997519>

Eubanks, V. (2018). *Automating inequality: How high-tech tools profile, police, and punish the poor*. St. Martin's Press.

Financial Times. (2025, April 21). *UAE set to use AI to write laws in world first*.

<https://www.ft.com/content/9019cd51-2b55-4175-81a6-eafcf28609c3>

Fine, A., Marsh, S., & R. Berthelot, E. (2025). Public Perceptions of Judges' Use of AI Tools in Courtroom Decision-Making : Public Perceptions of Judges' Use of AI Tools in Courtroom Decision-Making : An Examination of Legitimacy , Fairness , Trust , and Procedural Justice. *Behavioral Sciences*, 15(4), 1–21.

<https://doi.org/10.3390/bs15040476>

Hassouni, A., & Mellor, N. (2025). AI in the United Arab Emirates' Media Sector: Balancing Efficiency and Cultural Integrity. *Journalism and Media*, 6(1).

<https://doi.org/10.3390/journalmedia6010031>

Jubaidi, D., & Khoirunnisa, K. (2024). Artificial Intelligence in the Perspective of Indonesian Law : Subject or Object of Law ? *Asian Journal of Education and Social Studies*, 50(11), 302–314. <https://doi.org/10.9734/ajess/2024/v50i111655>

Kerdvibulvech, C. (2024). Big Data And AI-Driven Evidence Analysis: A Global Perspective On Citation Trends, Accessibility, And Future Research In Legal Applications. *Journal of Big Data*, 11(1), 1–24. <https://doi.org/10.1186/s40537-024-01046-w>

Khoirunnisa, K., Matthew, B., Jubaidi, D., & Nugroho, A. Y. (2025). The Ukraine-Russia conflict: An international humanitarian law review of the involvement of foreign fighters. *Social Sciences and Humanities Open*, 11(January), 101340.

<https://doi.org/10.1016/j.ssaho.2025.101340>

Min, A. (2023). Artificial Intelligence and Bias: Challenges, Implications, and Remedies.

Journal of Social Research, 2(11), 3808–3817. <https://doi.org/10.55324/josr.v2i11.1477>

Mohamed Ali Quteishat, E., Qtaishat, H., Anas, Ali, M., & Quteishat. (2024). Exploring the Role of AI in Modern Legal Practice: Opportunities, Challenges, and Ethical Implications. *Journal of Electrical Systems*, 20(6s), 3040–3050.

<https://doi.org/10.52783/jes.3320>

Munifah, M. (2024). Ethical Challenges in AI-Driven Decision-Making: Addressing Bias and Accountability in Business Applications. *Journal of Management and Informatics*, 3(1).

<https://doi.org/10.51903/jmi.v3i1.48>

Murikah, W., Nthenge, J. K., & Musyoka, F. M. (2024). Bias and ethics of AI systems applied in auditing - A systematic review. *Scientific African*, 25, e02281.

<https://doi.org/10.1016/j.sciaf.2024.e02281>

Nasir, K. (2025). The Impact Of Artificial Intelligence On Legal Systems. *International Journal Of Science Research And Technology*, 7(9), 1–10.

https://doi.org/INTERNATIONAL_JOURNAL_OF_SCIENCERESEARCH_AND_TECHNOLOGYVOL.7_NO.9_E-ISSN_3026-8796_P-ISSN_3026-8095TIMBOU-AFRICAPUBLICATIONINTERNATIONALJOURNAL_FEBRUARY_2025_EDITIONS. (PDF) THE IMPACT OF ARTIFICIAL INTELLIGENCE ON LEGAL SYSTEMS. Available from:

https://www.researchgate.net/publication/389915297_THE_IMPACT_OF_ARTIFICIAL_INTELLIGENCE_ON_LEGAL_SYSTEMS [accessed Apr 23 2025].

Pantanowitz, L., Hanna, M., Pantanowitz, J., Lennerz, J., Henricks, W. H., Shen, P., Quinn, B., Bennet, S., & Rashidi, H. H. (2024). Regulatory Aspects of Artificial Intelligence and Machine Learning. *Modern Pathology*, 37(12), 100609.

<https://doi.org/10.1016/j.modpat.2024.100609>

Starke, C., & Lünich, M. (2020). Artificial Intelligence For Political Decision-Making In The European Union: Effects On Citizens' Perceptions Of Input, Throughput, And Output Legitimacy. *Data and Policy*, 2(2). <https://doi.org/10.1017/dap.2020.19>

Susskind, R. (2019). *Tomorrow's lawyers: An introduction to your future* (2nd ed.). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780198840053.001.0001>

Taufiqurrohman, A. H. A., Muhtar, M. H., Ahmad, Kasim, N. M., & Imran, S. Y. (2024). The Role of Islamic Law, Constitution, and Culture in Democracy in the UAE and Indonesia. *Ahkam: Jurnal Ilmu Syariah*, 24(1), 83–100. <https://doi.org/10.15408/ajis.v24i1.33155>