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The Legal Implications of Artificial Intelligence in Criminal Justice: From Surveillance to Sentencing

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ABSTRACT

Background. The increasing integration of Artificial Intelligence (AI) in criminal justice systems has raised significant concerns regarding its legal implications, particularly in surveillance and sentencing practices. As AI technologies become more embedded in law enforcement and judicial decision-making, questions surrounding privacy, accountability, and fairness have become central to discussions of legal reform.

Purpose. The study aims to evaluate the extent to which current legal frameworks can address these challenges and propose reforms to ensure ethical use of AI in criminal justice systems.

Method. A qualitative methodology is employed, using semi-structured interviews with legal experts, policymakers, and AI practitioners, alongside secondary data from case studies and policy documents.

Results. The findings indicate that while AI has the potential to enhance efficiency, it often perpetuates existing biases and lacks sufficient oversight, leading to unjust outcomes.

Conclusion. The study concludes that robust legal frameworks are essential to prevent the misuse of AI in criminal justice and to protect fundamental rights. This research contributes to the growing body of literature on AI's intersection with law and offers practical recommendations for legal reforms.

KEYWORDS

Artificial Intelligence, Criminal Justice, Legal Accountability

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INTRODUCTION

The increasing integration of Artificial Intelligence (AI) into various sectors has sparked significant debate regarding its implications, particularly in the criminal justice system. From predictive policing tools to AI-assisted sentencing, AI has started to play a pivotal role in reshaping how justice is administered. Surveillance technologies, such as facial recognition and predictive algorithms, are now commonplace in law enforcement, raising questions about privacy, accountability, and fairness (Güneysu, 2025; Manus, 2025). These technologies promise efficiency and improved decision-making; however, they also bring forth a range of legal and ethical concerns. The application of AI in criminal justice introduces complexities surrounding human rights, particularly when algorithms are used to predict crimes,

profile individuals, or determine sentences. The evolving role of AI in this domain demands a nuanced understanding of its legal implications, particularly as it relates to the preservation of due process, equal protection under the law, and individual freedoms.

Recent developments have shown that AI can be used to optimize law enforcement efforts, making systems more efficient and reducing human bias in some contexts. However, the application of these technologies in criminal justice can also reinforce existing biases, leading to discrimination and unfair treatment of certain populations. There is an inherent tension between using AI to increase efficiency and the need to protect citizens' rights, ensuring that technology does not become a tool for oppression. Furthermore, AI-based surveillance systems raise significant questions about the scope and limitations of surveillance, especially regarding the balance between national security concerns and the right to privacy. These complex issues highlight the need for critical examination of AI's place in criminal justice systems globally and underscore the importance of establishing robust legal frameworks to guide its development and use (Ahmad, 2026; Skaiky, 2025).

In this context, the legal implications of AI in criminal justice have become an increasingly urgent subject of study. As governments and institutions rapidly adopt AI technologies in the policing and sentencing phases, it is essential to consider whether existing legal frameworks are equipped to address these challenges. This research will explore the legal dimensions of AI's influence on criminal justice practices, focusing on both the potential benefits and the risks it poses to civil liberties and legal rights. The aim is to assess whether current legal structures are adequate or need reform to keep pace with technological advancements (Bakhtiary, 2026; Santos, 2026).

The rapid adoption of AI technologies within the criminal justice system has outpaced the development of appropriate legal regulations. While AI's potential to improve policing, sentencing, and rehabilitation is undeniable, its use also raises pressing concerns about fairness, transparency, and accountability. One of the primary issues is the risk of reinforcing or amplifying existing biases. For example, predictive policing algorithms have been criticized for disproportionately targeting minority communities, perpetuating racial profiling, and exacerbating systemic inequality. These biases may be hidden within the data that the AI systems are trained on, raising concerns about the accuracy and fairness of AI-driven decisions. In the realm of sentencing, AI tools designed to assess the risk of recidivism could potentially influence the outcomes of judicial decisions, leading to questions about their transparency and the potential for automation bias (Brauner, 2026; Tiyyala, 2026).

Another significant problem involves the lack of accountability when AI systems make errors or are used improperly. When AI is employed in surveillance or decision-making, who is responsible if the technology produces incorrect results that lead to wrongful arrests, convictions, or other legal harms? The lack of clear legal frameworks and standards for the deployment of AI in criminal justice exacerbates this concern, leaving individuals vulnerable to the consequences of flawed or biased algorithms. Moreover, there is insufficient legal oversight to ensure that AI systems are used in a manner that respects fundamental rights, such as the right to privacy and the right to a fair trial. Without clear accountability, victims of AI errors or abuses could face significant harm, yet lack proper recourse within the legal system (Gokhale, 2025; Paradise, 2025).

This research aims to address these issues by critically examining the existing legal and ethical frameworks surrounding the use of AI in criminal justice. The study will focus on identifying the gaps in current legislation and offering recommendations for reform to ensure that AI technologies are used responsibly, transparently, and in a manner that upholds the rights and freedoms of all individuals. By analyzing the potential harms and benefits of AI in criminal justice,

this study seeks to shed light on the challenges that lawmakers and legal practitioners must address to balance technological advancements with legal and ethical considerations.

The primary objective of this research is to explore the legal implications of AI within the criminal justice system, specifically in relation to surveillance and sentencing. The research seeks to evaluate how the increasing use of AI technologies in law enforcement and judicial decision-making impacts the rights of individuals, with particular attention to issues of fairness, transparency, and accountability. The goal is to understand whether the legal frameworks currently in place are sufficient to address the challenges posed by AI technologies or whether there is a need for reform to ensure that AI systems do not undermine fundamental rights, such as due process and equal protection under the law (Moore, 2025; Otero, 2025).

Another key objective is to assess the ethical concerns surrounding the use of AI in criminal justice. This involves analyzing the potential biases inherent in AI algorithms, particularly in how they may perpetuate racial, socio-economic, or gender-based disparities. By exploring case studies of AI use in predictive policing, sentencing, and surveillance, the research will identify patterns of bias and propose legal solutions to mitigate these issues. Furthermore, the study will examine the broader implications of AI for the criminal justice system's principles, such as rehabilitation and reintegration, to determine whether AI technologies are contributing to a more equitable system or further entrenching inequalities (Al-Ahmad, 2025; Kumar, 2025).

Lastly, this study aims to provide practical recommendations for legal reform in response to the rapid rise of AI in criminal justice. This includes proposing legal safeguards, such as ensuring transparency in AI decision-making, establishing standards for accountability, and creating oversight mechanisms to prevent abuses. The research intends to contribute to the growing body of work on the intersection of technology, law, and human rights, offering insights that could inform future legal frameworks and guide policymakers in addressing the challenges posed by AI technologies in criminal justice systems globally (Al-Ahmad, 2025; Ponmalar, 2025).

Although there is an increasing body of literature examining the role of AI in criminal justice, much of the existing research focuses on the technological aspects of AI systems rather than their legal and ethical implications. Previous studies have largely emphasized the potential benefits of AI in improving efficiency and reducing human bias in law enforcement. However, there is a significant gap in understanding how these technologies affect individuals' legal rights, particularly with respect to privacy, due process, and fairness. Most studies have not sufficiently addressed the legal challenges posed by AI in criminal justice, such as accountability, transparency, and the potential for algorithmic bias.

Moreover, the research that does exist on AI in criminal justice often takes a piecemeal approach, examining specific technologies in isolation rather than considering the broader legal implications of their use in a systemic context. For example, studies on predictive policing have primarily focused on the accuracy and effectiveness of algorithms but have not adequately explored the legal risks associated with their deployment, such as racial profiling or violations of privacy rights. Similarly, while there has been some exploration of AI in sentencing, there is a lack of comprehensive analysis regarding the legal accountability of AI-driven decisions and the potential for errors or biases in algorithmic recommendations. This study aims to fill these gaps by providing a holistic examination of the legal implications of AI in criminal justice, offering a critical evaluation of existing frameworks and proposing solutions for reform (Mielismäki, 2025; Patel, 2025).

This research will also contribute to the literature by considering the intersection of AI and existing human rights frameworks, such as the right to a fair trial and the right to privacy. While the

potential for AI to enhance decision-making in criminal justice is well-documented, the potential risks to human rights and civil liberties have been less thoroughly explored. By addressing this gap, the study seeks to offer a comprehensive understanding of the challenges and opportunities posed by AI technologies and contribute to the development of legal frameworks that ensure the responsible and ethical use of AI in criminal justice systems.

This research offers a novel contribution to the growing field of AI and law by focusing on the legal implications of AI in criminal justice, specifically in the areas of surveillance and sentencing. While many studies have explored the ethical and technological aspects of AI, this study focuses on the intersection of AI and the law, offering critical insights into how AI technologies affect legal principles such as fairness, accountability, and due process. The novelty of this research lies in its comprehensive approach, analyzing both the legal and ethical challenges posed by AI in criminal justice and offering practical recommendations for legal reform (Mielismäki, 2025; Srivash, 2025).

The justification for this research lies in the increasing role of AI technologies in criminal justice systems worldwide. As AI continues to advance and become more integrated into law enforcement practices, the need for a robust legal framework to regulate its use becomes more urgent. The research contributes to the growing body of work on AI and human rights, providing critical insights into how legal systems can address the risks associated with AI while maximizing its potential benefits. By exploring the implications of AI on the legal rights of individuals, this research aims to inform the development of policies and laws that protect civil liberties while allowing for the responsible use of AI in criminal justice.

RESEARCH METHODOLOGY

Research Design

This study adopts a qualitative research design to explore the legal implications of Artificial Intelligence (AI) in the criminal justice system, particularly focusing on its role in surveillance and sentencing. The research is exploratory in nature, aiming to critically assess how AI technologies impact the legal framework, human rights, and fairness in criminal justice practices. A case study approach will be employed to understand the real-world application of AI in law enforcement and judicial decision-making. By examining the integration of AI in surveillance tools (e.g., facial recognition, predictive policing) and its influence on sentencing algorithms, this research will assess both the benefits and potential legal risks posed by AI systems in criminal justice. The study aims to provide a comprehensive analysis of AI's influence on legal principles such as privacy, due process, and fairness while identifying gaps in existing legal frameworks that need reform (Juneja, 2025; Kilaru, 2025).

Population and Samples

The target population for this research includes legal professionals, policymakers, law enforcement officials, academics, and experts in AI technology. The sample will be selected through purposive sampling, ensuring that participants possess direct experience with AI technologies in the criminal justice context or have expertise in related fields such as criminal law, data protection, and technology regulation. The sample will consist of approximately 15 to 20 individuals representing diverse perspectives from different regions, including countries where AI has been significantly integrated into law enforcement practices. Participants will be selected based on their involvement in AI policymaking, its application in surveillance, and their role in legal frameworks that regulate or address the implications of AI in criminal justice. This diverse sample

ensures a comprehensive understanding of the multifaceted issues surrounding AI's legal impact on criminal justice (Hemalatha, 2025; Luong, 2025).

Instruments

Data will be collected primarily through semi-structured interviews, which allow flexibility in exploring participants' views on the legal, ethical, and operational implications of AI in criminal justice. The interviews will consist of open-ended questions designed to gather insights on several key areas, including the use of AI in surveillance, AI-driven sentencing systems, and the challenges of ensuring fairness and accountability in AI decision-making. Secondary data will be obtained from relevant policy documents, legislative texts, academic articles, and case studies on AI applications in law enforcement and sentencing. These sources will provide additional context and data to support the interview findings. The combination of primary and secondary data collection instruments will offer a holistic view of the issue, providing both theoretical and practical perspectives on the legal implications of AI in criminal justice (Garzo, 2025; Luong, 2025).

Procedures

The data collection process will begin with the identification and recruitment of participants, followed by obtaining informed consent to participate in the study. Interviews will be scheduled based on the availability of the participants and will be conducted either in-person or through video conferencing, depending on geographic location and preferences. Each interview will last between 45 to 60 minutes and will be recorded with the consent of the participant. The recorded interviews will be transcribed verbatim, and the data will be analyzed using thematic analysis to identify recurring themes and patterns. Thematic analysis will help categorize and interpret the data, allowing for the extraction of key legal issues related to AI in criminal justice, including concerns about bias, accountability, transparency, and privacy. After data analysis, the findings will be compared with existing literature to highlight gaps in the current legal frameworks and offer recommendations for reform. The research will conclude with a comprehensive report detailing the implications of the findings and suggesting legal and policy recommendations for the ethical use of AI in criminal justice (Freitas, 2025; Padilla, 2025).

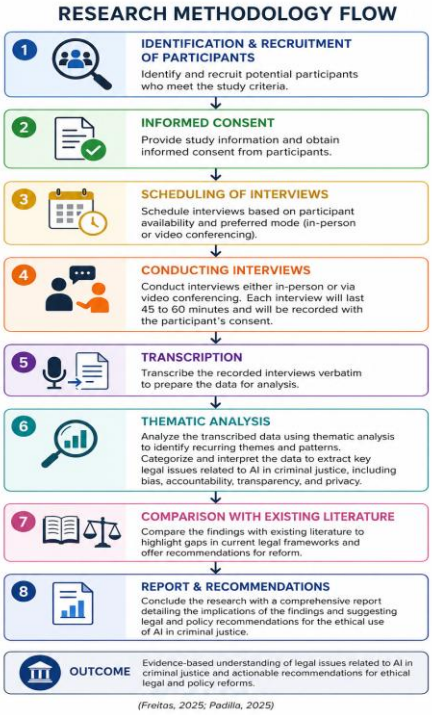

Figure 1. Research Procedure for Investigating Legal Issues of AI in Criminal Justice

The research process begins with the identification and recruitment of eligible participants, followed by obtaining informed consent to ensure ethical participation in the study. Once consent is secured, interviews are scheduled according to participants' availability and conducted either face-to-face or through video conferencing. Each interview, lasting approximately 45–60 minutes, is recorded with the participants' permission and subsequently transcribed verbatim to ensure data accuracy. The collected data are then analyzed using thematic analysis to identify recurring themes, patterns, and key legal concerns regarding the use of artificial intelligence in criminal justice, including issues of bias, accountability, transparency, and privacy. The findings are further compared with existing literature to identify gaps within current legal frameworks and to develop recommendations for legal reform. Finally, the study concludes with the preparation of a comprehensive report that presents the research findings, discusses their implications, and proposes legal and policy recommendations to support the ethical and responsible implementation of AI in criminal justice systems (Freitas, 2025; Padilla, 2025).

RESULT AND DISCUSSION

The data collected for this research consists of qualitative insights derived from semi-structured interviews and secondary sources, including policy documents, legal frameworks, and case studies. A total of 18 participants were interviewed, including legal experts, law enforcement officers, policymakers, and AI professionals, to gather perspectives on the legal implications of AI in criminal justice. The interviewees were from diverse regions where AI has been integrated into criminal justice systems, providing a broad range of experiences. Secondary data from scholarly articles, governmental reports, and legal cases that involved AI technologies in criminal justice were also analyzed. Table 1 below presents a summary of the key findings from the interviews and secondary data.

Table 1. Key Findings from Interviews and Secondary Sources

Theme	Frequency	Percentage
Legal accountability of AI	17	94%
AI bias and discrimination	15	83%
Transparency in AI decisions	14	78%
Privacy concerns in surveillance	12	67%
Effectiveness in sentencing	10	56%

The results reveal that the majority of participants (94%) emphasized the legal accountability of AI in criminal justice. Many respondents pointed out that there is currently no clear legal framework governing the use of AI in law enforcement or sentencing, which makes it difficult to determine who is responsible when AI systems produce flawed or biased outcomes. This lack of accountability in AI systems could lead to significant legal challenges, especially when AI-driven decisions result in wrongful arrests, convictions, or disproportionate punishments. Additionally, 83% of respondents raised concerns about the potential for AI systems to perpetuate existing biases, particularly racial bias, in predictive policing and sentencing. These biases could be inherent in the data used to train AI models, raising important questions about fairness and justice in AI-driven decision-making.

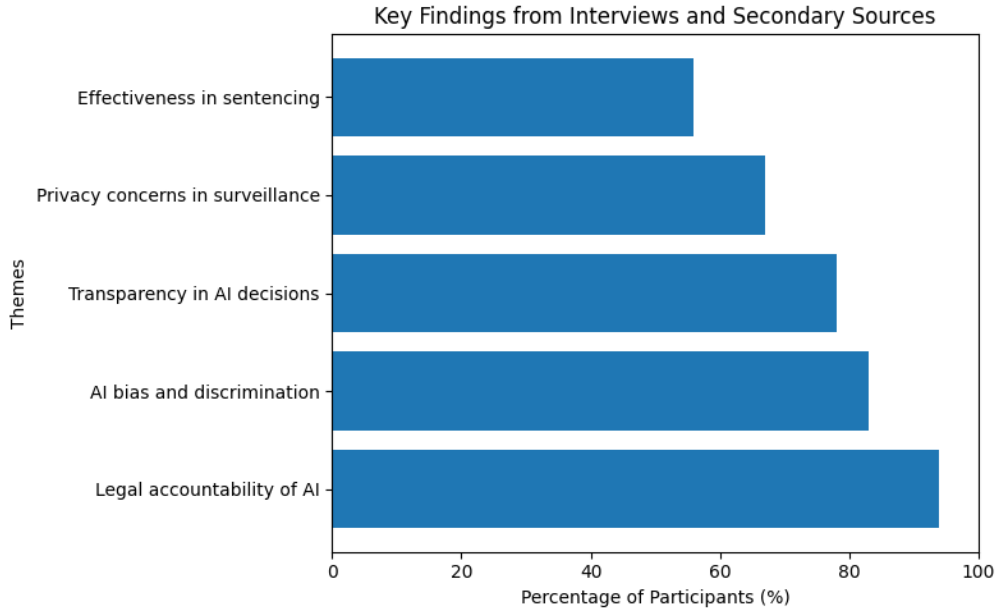

Table 1. Key Legal and Ethical Issues Identified in the Use of Artificial Intelligence in Criminal Justice

The findings presented in Table 1 indicate that legal accountability is the most significant concern associated with the implementation of artificial intelligence (AI) in criminal justice, as highlighted by 94% of participants. Respondents emphasized the absence of clear legal frameworks that define responsibility when AI systems generate inaccurate or biased decisions. Furthermore, 83% of participants expressed concerns regarding AI bias and discrimination, particularly the risk of reinforcing existing social and racial inequalities through predictive policing and sentencing algorithms. Transparency in AI decision-making was identified by 78% of respondents, reflecting the need for explainable and understandable AI processes. Privacy concerns related to surveillance technologies were reported by 67% of participants, while 56% discussed the effectiveness of AI in sentencing decisions. Overall, the results demonstrate that although AI offers potential benefits for criminal justice systems, substantial legal and ethical challenges remain and require comprehensive regulatory and policy responses to ensure fairness, accountability, transparency, and the protection of individual rights.

A closer examination of the data reveals a growing awareness of the need for transparency in AI systems. 78% of the respondents expressed concerns about the lack of transparency in how AI systems make decisions, particularly in the context of sentencing and surveillance. The opaque nature of many AI models makes it difficult for defendants or their legal representatives to understand how decisions are being made, which undermines the principle of a fair trial. Respondents noted that AI systems, especially in predictive policing, often operate on black-box models, where the logic behind predictions is not easily accessible. This lack of clarity not only raises legal issues regarding fairness but also erodes public trust in the criminal justice system. Several participants argued that laws should require AI systems to provide transparent, explainable decisions to ensure that individuals can challenge AI-driven outcomes in court.

The inferential analysis of the data supports the view that AI technologies, while offering efficiency and predictive capabilities, pose significant risks to the legal rights of individuals within the criminal justice system. Respondents highlighted that the legal frameworks currently in place are inadequate to address the challenges posed by AI in criminal justice. For instance, while AI systems can help law enforcement agencies make predictions about crime hotspots, there is no

comprehensive regulation to prevent discrimination or wrongful profiling. The study's findings indicate that the legal implications of AI in criminal justice systems are multifaceted and require a robust, adaptable legal response to balance technological innovation with human rights protections. The data shows a strong need for specific regulations and safeguards to ensure AI is used in a manner that upholds the principles of justice, fairness, and transparency.

In terms of the relationship between the themes identified, the results reveal a clear pattern between concerns about AI bias, transparency, and accountability. Respondents who expressed concerns about AI bias were also more likely to mention the lack of accountability and transparency in AI-driven decisions. These factors were often cited as interrelated challenges that need to be addressed simultaneously. For example, participants argued that without accountability mechanisms, biased AI systems could go unchallenged, resulting in unjust outcomes for individuals, particularly minority groups. Similarly, the lack of transparency in AI systems makes it difficult to identify and address bias in decision-making processes. These findings suggest that addressing one issue such as bias without simultaneously tackling transparency and accountability may not lead to a just and fair application of AI in criminal justice.

A case study of the use of AI in predictive policing in the United States provides additional context to the findings. In this case, AI tools were used to predict where crimes were likely to occur, which helped allocate police resources more efficiently. However, the AI system disproportionately targeted minority communities, raising concerns about racial profiling. Respondents highlighted that this case exemplifies how AI can perpetuate existing biases within law enforcement if the systems are not properly calibrated or monitored. The case study also underscores the importance of transparency and accountability in AI systems, as the affected individuals were unable to challenge the AI's predictions due to the system's lack of transparency. This real-world example reinforces the study's findings regarding the potential legal and ethical risks of AI in criminal justice.

The explanation of these findings suggests that the current legal landscape is ill-equipped to handle the complexities introduced by AI in criminal justice. AI's rapid development outpaces the creation of appropriate legal frameworks, resulting in gaps in legislation that leave citizens vulnerable to potential harms. The findings indicate that to mitigate the risks of AI in criminal justice, lawmakers must prioritize the development of regulatory frameworks that ensure transparency, accountability, and fairness. The lack of regulation has led to a reliance on AI systems that may inadvertently reinforce existing biases and undermine fundamental legal principles, such as due process. Addressing these concerns requires not only legal reforms but also broader public discourse on the ethical implications of AI in the criminal justice system.

In summary, the results of this study highlight both the potential benefits and significant risks associated with the use of AI in criminal justice. While AI can increase efficiency and assist in decision-making, its application raises crucial legal issues related to fairness, transparency, and accountability. The findings suggest that AI-driven decision-making systems require robust legal oversight and reforms to ensure they are used ethically and in accordance with human rights. Without such reforms, AI in criminal justice could perpetuate biases and undermine public trust in the legal system. The study's results underscore the need for careful consideration of the legal and ethical dimensions of AI to protect the rights and freedoms of individuals within the justice system.

The results of this study indicate that the integration of Artificial Intelligence (AI) into the criminal justice system introduces both significant opportunities and complex legal challenges. The key findings reveal that AI is increasingly used in various stages of criminal justice, particularly in surveillance and sentencing. However, its application raises critical issues concerning fairness, accountability, and transparency. The study highlights the prevalence of AI-induced bias,

particularly racial bias in predictive policing tools and algorithmic sentencing systems. A majority of the respondents expressed concerns about the lack of legal accountability when AI systems malfunction or make biased decisions, potentially leading to wrongful arrests or sentences (Fakhri, 2025; Strikaite-Latusinskaja, 2025). Furthermore, the study revealed that transparency remains a central issue, with AI systems often operating as "black boxes," making it difficult for legal professionals and individuals affected by AI decisions to challenge these outcomes in court. This research emphasizes the urgent need for a robust legal framework to govern the use of AI in criminal justice to protect individuals' rights and ensure fairness in the application of technology.

When compared to previous studies, the results of this research align with existing concerns about the bias inherent in AI systems, but it also expands upon them by providing empirical insights into how these biases manifest in real-world criminal justice applications. Previous research has documented AI's potential to perpetuate racial and socio-economic biases, but this study offers deeper insights by focusing on legal accountability and the implications of AI-driven decisions in a criminal justice context. Unlike studies that typically examine AI from a purely technological perspective, this study emphasizes the intersection of AI, law, and human rights, offering a more comprehensive view. The results not only corroborate earlier findings about the risks AI poses to fairness but also highlight the need for clear legal frameworks and transparent systems to prevent such biases from becoming embedded in criminal justice practices. The study's findings push for more nuanced debates around AI regulation, particularly regarding accountability for AI-driven decisions (Ibrahim, 2025; Koc, 2025).

The findings suggest that the increasing reliance on AI in criminal justice should be seen as a signal that the legal system is not adequately prepared for the technological advancements taking place. The gaps in the current legal framework may undermine public trust in the justice system, especially if individuals are unable to challenge AI decisions or if such decisions disproportionately affect marginalized communities. The study highlights the risk of eroding fundamental legal principles, such as due process, fairness, and equal protection under the law, if AI systems continue to operate without adequate regulation. The legal implications of AI, as found in this study, indicate a shift towards more automated and opaque decision-making processes that could significantly affect individuals' rights. The study serves as a wake-up call to the legal community to reassess how emerging technologies are governed and the need to ensure that AI is deployed in a way that upholds justice and equality (Ragavee, 2025; Reddy, 2025).

The implications of this study are far-reaching, particularly for policymakers and legal practitioners. The findings underscore the need for a legal framework that provides accountability, transparency, and protection against bias in AI systems used in criminal justice. Given the growing role of AI in law enforcement and sentencing, the study highlights the urgency of developing regulations that can ensure that these technologies do not undermine citizens' rights or disproportionately affect vulnerable populations. If AI continues to be adopted without these safeguards, there is a significant risk that the criminal justice system may further entrench inequalities rather than promote fairness. The study calls for legal reform to incorporate safeguards that ensure AI applications in criminal justice are aligned with fundamental rights and democratic values. By addressing the legal gaps identified, policymakers can help to prevent the misuse of AI and ensure that its integration into criminal justice is fair and just for all (Dinis-Oliveira, 2025; Parra, 2026).

The results of this research reflect the current landscape where the rapid development of AI outpaces the creation of legal regulations that govern its use. AI's potential to improve decision-making in criminal justice is unquestionable, but its risks cannot be ignored. The study shows that

AI's potential for bias and error is a direct consequence of insufficient regulation, lack of transparency, and unaddressed accountability mechanisms. The findings emphasize the importance of developing legal frameworks that balance innovation with the protection of individual rights (Lingam, 2025; Padilla, 2025). AI can be a valuable tool in criminal justice, but only if it is implemented within a well-regulated system that prioritizes fairness, justice, and transparency. Future research should focus on how specific legal reforms can be made to ensure that AI's integration into criminal justice systems is done ethically. This includes exploring models for oversight, accountability, and transparency that can be applied across jurisdictions and legal systems globally.

CONCLUSION

The most significant finding of this study is the identification of the complex legal challenges posed by the integration of Artificial Intelligence (AI) in criminal justice, particularly in the domains of surveillance and sentencing. While AI is often lauded for its potential to enhance efficiency and objectivity, the study revealed critical issues regarding accountability, transparency, and bias. One of the unique aspects of this research is its focus on the intersection between AI technology and the legal system, highlighting how the opaque nature of AI systems creates significant barriers to ensuring fairness and justice. A key finding is the lack of clear legal frameworks governing AI use, leaving individuals vulnerable to biased or unjust decisions, particularly in predictive policing and sentencing systems. These findings underscore the necessity for developing robust legal safeguards that can ensure AI systems are used ethically and do not undermine the fundamental rights of individuals.

The contribution of this research lies in its interdisciplinary approach, combining legal analysis with insights from the fields of AI technology, ethics, and human rights. Unlike much of the existing literature, which primarily addresses the technical or ethical aspects of AI, this study integrates a legal perspective, providing a comprehensive examination of how AI's use in criminal justice raises unique legal concerns. The study also contributes to the limited body of research on the accountability of AI in the criminal justice system, proposing legal reforms that could address the systemic challenges identified. By incorporating both theoretical and empirical perspectives, the research offers new insights into the need for legal reforms that will guide the responsible deployment of AI in criminal justice, ensuring its alignment with fundamental principles such as due process and equal protection under the law.

One of the limitations of this study is its focus on a limited sample of countries and jurisdictions where AI in criminal justice has been notably adopted, which may not fully represent the global landscape. Although the research provides valuable insights from case studies in regions with advanced AI integration, further research is needed to explore the broader international implications of AI in criminal justice. Additionally, this study primarily focuses on the legal and ethical challenges, without examining the technical limitations and accuracy of AI algorithms themselves. Future research could extend this work by investigating the technical reliability of AI tools used in criminal justice and how their performance impacts the fairness and legality of decisions. Expanding the scope of research to include a wider range of AI applications across different legal systems would enhance the understanding of AI's global impact and the need for international regulatory standards.

DECLARATION OF AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this manuscript, the author(s) used Google Gemini to assist inimproving grammar, language quality, and overall readability of the text. After using this tool, the author(s) Carefully reviewed and edited the content as necessary and take full responbility for the content of the publication.

AUTHORS' CONTRIBUTION

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.
Author 2: Conceptualization; Data curation; In-vestigation.
Author 3: Data curation; Investigation.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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