https://doi.org/10.62585/ilhr.v5i1.149

Volume and Issues Obtainable at Centeriir.org
Journal of International Law & Human Rights
ISSN (Print): 3007-0120 ISSN (Online): 3007-0139
Volume 5, No.1, 2026
Journal Homepage: http://journals.centeriir.org/index.php/jilhr

ARTIFICIAL INTELLIGENCE IN PAKISTAN'S CRIMINAL JUSTICE SYSTEM: POLICY, ETHICS, AND FUTURE DIRECTIONS

Muhammad Umar[1] **Muhammad Usama Wajid**[2] **Malik Zia ud Din**[3]

[1] Advocate District Bar Association, Bahawalpur. E-Mail: umarkhakwani17@gmail.com
[2] Advocate, District Bar Association, Dera Ghazi Khan. E-Mail: usamawajidadv@gmail.com
[3]Assistant Professor, Department of Law, The Islamia University of Bahawalpur. E-Mail: malik.ziauddin@iub.edu.pk

ABSTRACT

The current enthusiasm for artificial intelligence (AI) as a criminal justice reform measure has led to discussions about whether it can lead to efficiency without compromising fairness and accountability. Some of the long-standing problems faced in Pakistan, including backlogged cases, inadequate resources, and delays in the process, have heightened interest in AI-enabled software in the police, adjudication, and correction sectors. The article investigates the extent, threats, and regulatory aspects of AI implementation in the criminal justice system of Pakistan based on a qualitative, doctrinal and desk-based research on legal regulations, policy documents and practice comparisons. As it can be seen, AI can be used to assist with investigative, evidence examination, and case handling, and it can possibly help raise the accuracy rates and minimize delays. Meanwhile, issues such as the lack of a specialized regulatory framework, the risks of algorithmic bias, a threat to privacy and due process, insufficient institutional capacity, and biased access to digital infrastructure arise. It concludes that the legal regulation, institutional capacity-building, ethical control, and gradual implementation are a set of measures that make AI adoption responsibilities in Pakistan. The article is relevant to policy and scholarly issues about how to balance technological innovation with the rule of law and human rights by putting AI in the context of the constitutional and socio-legal environment in Pakistan.

Article History: Received: 16-10-2025 **Accepted**: 02-01-2026 **Published**: 18-01-2026
Keywords: Domestic violence, Pakistan, gender-based violence, implementation gap, patriarchy, honour

Corresponding Author's Email: **malik.ziauddin@iub.edu.pk**

https://doi.org/10.62585/ilhr.v5i1.149

Introduction

The quick evolution of Artificial Intelligence (AI) is transforming institutions around the globe, criminal justice being among them, as it is affecting the way crimes are identified, inspected, charged, and sentenced (Smith and Johnson, 2021; Global Institute for AI Policy, 2022). AI technologies are being used more in predictive policing, digital forensics, surveillance analysis, risk assessment, and judicial decision-support in most jurisdictions, and it is claimed that such technologies can make the decision-making process more efficient, consistent, and accurate (International Justice Institute, 2023; Zaman and Yousaf, 2023). Simultaneously, their implementation has raised major legal and ethical issues, especially when it comes to equity, openness, responsibility, and safeguarding basic rights.

The criminal justice of Pakistan is long-term associated with the backlog of cases, inefficiencies in the functioning of the system, scarce resources, and issues of transparency and accountability (Baig and Zafar, 2021; Raza and Shah, 2024). It is in response to these structural pressures that formats of technological interventions, such as AI-based tools, have become increasingly popular among policymakers and institutions as possible ways of enhancing investigations, adjudication, and corrections (Khan and Malik, 2022; Ali and Rahman, 2023). Courts, law enforcement agencies and correctional institutions (especially in large urban centres) have started to experiment with data-driven surveillance, evidence analysis and case management technologies, a sign that an algorithm-supplied criminal justice process is beginning to emerge.

The possibilities of AI to be introduced into the criminal justice system in Pakistan are very broad. Predictive analytics and crime-map tools may be used in policing to determine crime patterns and assign limited resources in a more effective manner (Malik and Qureshi, 2022; Zaman and Yousaf, 2023). Facial recognition, CCTV analysis and digital forensics tools run on AI can enhance accuracy and speed of evidence collection and investigation (Abbas and Iqbal, 2024; Mustafa, 2022). In the courts, the AI-driven systems may assist with legal research, case management, and organizing the evidence, which may help mitigate the delays and increase the uniformity of the judicial proceedings (Ali and Rahman, 2023; Khan and Mahmood, 2023). Risk assessment, inmate classification, and rehabilitation planning are the AI tools that have been suggested in correctional settings (Ahmed and Qureshi, 2021; Rashid and Jamil, 2022).

Notwithstanding such possibilities, the implementation of AI in the criminal justice system of Pakistan is associated with severe legal, ethical, and institutional issues. The current regulatory and legal framework has not been well-accliminated to the concept of algorithmic decision-making, massive data processing, and surveillance using AI (Ahmed and Khan, 2023; Mahmood and Niaz, 2024; Mirza and Khan, 2024).

The issues of algorithmic bias, insufficient transparency, violation of privacy, and accountability are especially urgent in a socio-legal setting, where inequality, uneven digitization, and insufficient data protection measures exist (Iqbal and Hussain, 2022; Saeed and Akhtar, 2023). Moreover, the lack of technological infrastructure, technical capability, and digital literacy among criminal justice stakeholders limits the responsible and efficient application of AI (Farooq and Khan, 2023; Ahmed and Qureshi, 2021).

Although the international academic literature has widely explored how AI can be used in the criminal justice system, there is little systematic analysis of this issue in relation to Pakistan. Current literature tends to focus on a single application or across-the-board technology reforms without necessarily delving into the legal, ethical, and policy value chain of AI implementation in policing, courts, and corrections. This paper attempts to fill this gap by discussing the scope, risks, and governance issues of AI in the criminal justice system in Pakistan. It claims that despite the genuine potential of AI to increase efficiency and improve the decision-making process, its implementation should be supportive and not decisive, and should be backed by explicit legal frameworks, ethical standards, and institutional capacity-building to prevent the violations of constitutional rights and fundamental freedoms (Raza and Ali, 2022; Hussain and Mehmood, 2023).

Literature Review

The international and national literature on AI and criminal justice provides important context for assessing its potential role in Pakistan.

AI in criminal justice globally.

AI is being used more widely in the criminal justice chain around the world, including predictive policing and crime mapping, risk assessment and digital forensics (Smith and Johnson, 2021; Smith and Lee, 2021). Researchers note the possible benefits of AI in decision-making in terms of accuracy, efficiency, and uniformity, but also recommend the potential risks of bias, non-transparency, and infringements on rights (Global Institute for AI Policy, 2022; International Justice Institute, 2023). Comparative research, such as that on South Asia, highlights that the legal culture, institutional capacity, and regulatory approaches play a key role in the adoption and regulation of AI (Singh and Patel, 2021; Raza and Ali, 2022).

AI applications in Pakistan's law enforcement

There is yet to be momentum in the use of AI in law enforcement in Pakistan. Research documents that facial recognition systems, predictive policing algorithms, and digital forensics have been gradually

used in large urban centres like Lahore, Karachi, and others (Khan and Malik, 2022; Malik and Qureshi, 2022; Mustafa, 2022). It has been reported that these tools have helped to detect and prevent some scenarios, but on the other hand, have raised concerns of misidentification, surveillance, and privacy (Qasim and Rehman, 2021; Saeed and Akhtar, 2023).

AI in judicial processes

The existing literature on AI and its applicability in Pakistani judicial procedures makes it clear that AI can be used to help manage cases, analyze evidence, and conduct legal research (Ali and Rahman, 2023; Khan and Mahmood, 2023). Case management systems and databases of legal cases assisted with AI are perceived as the solution to the backlog and more consistent judicial decision-making. Nevertheless, creators warn that AI tools should be supportive but not determinative, and that these decisions need to be trained and be able to interpret and analyze the results of AI (Khan, 2023; Hussain and Mehmood, 2023).

Ethical and human rights concerns.

Other researchers like Iqbal and Hussain (2022) predict ethical issues, mainly algorithmic bias, due process, and the threat of human rights abuse. They demand that strict policies, independent oversight and impact assessments be implemented before AI tools are implemented at scale. According to international and domestic reports, AI in the context of criminal justice should align with constitutional guarantees, the right to a fair trial, and non-discrimination (International Justice Institute, 2023; Rahman and Bilal, 2024) as well.

AI in correctional facilities.

The AI has been mentioned in the context of correctional settings as an inmate behaviour monitoring tool, risk assessment, and personalised rehabilitation programme (Ahmed and Qureshi, 2021; Rashid and Jamil, 2022). As much as these strategies could enhance safety and decrease recidivism, dehumanization, over-surveillance, and opaque risk scores during the parole process have also been brought to the fore.

Legal framework and policy implications.

Ahmed and Khan (2023), Mirza and Khan (2024), and Mahmood and Niaz (2024) discuss the changing legislation on AI, data protection, and digital evidence in Pakistan. They find major loopholes in the statutory regulation, institutional control, and judicial directions. Raza and Shah (2024) and Raza and Ali (2022) appear to suggest a policy-oriented approach to AI in criminal justice, which requires

thorough legislation on AI, accountability, and multi-stakeholder engagement in the development of regulatory responses.

On the whole, the information in the literature leads to the conclusion that AI has the potential to offer effective solutions to criminal justice in Pakistan, but its implementation should be strictly regulated, situational, and based on human rights and the rule of law (Zaman and Yousaf, 2023; Hussain and Mehmood, 2023).

Statement of the Problem

The implementation of artificial intelligence in the criminal justice system of Pakistan has some opportunities to enhance its efficiency and aid in decision-making, but it poses critical legal, ethical, and institutional issues. One of the major problems is the lack of a complex legal and regulatory system on the use of AI in criminal investigation, adjudication, and corrections which leaves ambiguity concerning transparency, accountability, and a fair trial right (Ahmed and Khan, 2023; Mahmood and Niaz, 2024; Mirza and Khan, 2024).

Another effect of AI-driven systems is the increased threat to privacy and civil liberties due to the fact that these systems are based on the mass processing of sensitive personal data in a legal context where the protection of personal data is not guaranteed (Qasim and Rehman, 2021; Saeed and Akhtar, 2023; Rahman and Bilal, 2024). Institutional capacity limits, poor infrastructure, and inadequate technical knowledge add to these risks and lead to the probability of bias, overreliance on algorithms, and the loss of public trust (Baig and Zafar, 2021; Iqbal and Hussain, 2022; Hussain and Mehmood, 2023). Such issues indicate that a specific legal and policy analysis is required to make sure that AI reinforces, but does not jeopardize, justice and the rule of law in Pakistan.

Research Objectives

The study has these main objectives:

1. To show where and how AI is used (or can be used) in Pakistan's criminal justice system, especially in the police, courts, and prisons.
2. To see how AI can make the system faster, more accurate, and fairer, for example in case management, legal research, and evidence analysis.
3. To find the main problems and risks of using AI in Pakistan's criminal justice system, such as bias, lack of transparency, privacy issues, and poor infrastructure.

4. To compare Pakistan with other countries and learn what Pakistan can copy or avoid when using AI in criminal justice.
5. To give policy and legal suggestions for using AI in a safe and responsible way, to guide the government, police, courts, and other institutions.

Research Questions

This study answers the following questions:

1. How can AI help improve investigations and court decisions and reduce wrongful convictions in Pakistan?
2. How can AI be used in the police, courts, and prisons to make the system faster and fairer?
3. What are the main problems and obstacles to using AI safely and effectively in Pakistan's criminal justice system?
4. How does AI affect decisions made by police and courts, and what rules and safeguards are needed to protect people's rights?

Research Methodology

The research methodology used in this study is a qualitative, doctrinal, and descriptive research method which relies mostly on the secondary information. It is done to look at the legal, regulatory, and policy implications of the implementation of artificial intelligence in the criminal justice system in Pakistan. The interpretation of the relevant statutes, constitutional provisions, and judicial decision is carried out through the doctrinal analysis whereas the descriptive approach helps to grasp the existing practices and debates.

The study relies on scholarly books, peer-reviewed journal articles, policy reports, and legal sources of Pakistan and other common law jurisdictions, especially. The academic databases and legal research platforms were used to locate the sources, paying special attention to the recent and context-related literature. The theme of the analysis is interpretive and thematic with the key issues being regulation, accountability, privacy and fairness.

Being a desk-based study, the research will not involve primary empirical data. Although this is a limitation, the methodology suits a research conducted to explore the issue of AI and criminal justice in Pakistan and offers a reasonable base of empirical studies to be carried out in the future.

Current State of AI in Pakistan's Law Enforcement

When analyzing the application of Artificial Intelligence (AI) in the Pakistani criminal justice system, one must start with the current situation when it comes to the application of AI in the law enforcement agencies. Pakistan has been making the first steps toward the implementation of AI technologies to improve the efficiency and effectiveness of policing in recent years, especially in large cities, including Lahore and Karachi (Khan and Malik, 2022; Malik and Qureshi, 2022).

Among these is the crime prevention and identification through AI-driven predictive analytics. Police departments have started to use machine learning algorithms to collect historical crime data, detect trends, and forecast possible hotspots. This allows allocating resources more strategically and using the personnel more efficiently in more likely areas of crime and helping to be more proactive in policing (Baig & Zafar, 2021; Zaman and Yousaf, 2023). Ideally, these tools will be useful in decreasing the rate of crime and enhancing the capacity of solving cases, but the evidence of their practical effects in Pakistan remains to be scrutinized in detail.

Another increasing role of AI in the modernization of investigations and evidence management is also provided. Artificial intelligence-driven tools can help investigators to process the vast amounts of digital evidence (CCTV footage, voice records, and data on electronic communication, etc.) (Mustafa, 2022; Abbas and Iqbal, 2024). These systems can shorten the length of the investigation by automating the pattern recognition and search features and decreasing the chance of missing the appropriate material that can be used to prove a crime, thus decreasing the chance of impunity and wrongful charges.

Moreover, criminal profiling and suspect identification with the help of AI is becoming more popular. It is utilizing facial recognition and biometric technologies to compare the suspects with already existing databases, helping to quickly catch the criminals (Khan and Malik, 2022; Qasim and Rehman, 2021). Although such tools have the potential to enhance the speed of the investigation process, they also cast doubt on the possibility of misidentification and discrimination in the form of targeting, particularly when the underlying information or algorithms are discriminatory (Iqbal and Hussain, 2022).

In general, the existing trend of AI implementation in the law enforcement of Pakistan is encouraging yet disproportionate. It seems that the implementation of AI technologies is leading to more effective and accurate performance of certain investigative and preventive tasks and, therefore, may increase the rates of cases solved. Meanwhile, the ethical and privacy issues and the threat of inaccuracy and bias draw the

attention of the need to establish solid protection in case AI will assist in decreasing, instead of causing, wrongful arrests and wrongful convictions.

AI in Judicial Processes in Pakistan

Introduction of AI in judicial procedures in Pakistan is also a major area of the criminal justice system changes. Even in its infancy, there are a number of initiatives and proposals that demonstrate how AI can be used to assist courts, lawyers, and other legal members (Ali and Rahman, 2023; Khan and Mahmood, 2023).

Case management is one of the areas. AI-powered or algorithmically aided programs may assist in arranging and monitoring big numbers of cases, dates, and procedures, lowering administrative overheads and enhancing quality in the system of docket management (Ali and Rahman, 2023). To a judicial system that has suffered due to a perceived never-ending backlog and wastage of time, these tools can promise to streamline the progression of cases and make the system more predictable and efficient.

The field of AI research and analysis is also investigated in the legal field. Judges and lawyers can get quick access to the pertinent authorities with the help of algorithms that can search big databases of statutes, precedents, and legal commentary to support the development of arguments and judgments (Khan and Mahmood, 2023; Hussain and Mehmood, 2023). This may increase the quality and uniformity of reasoning, especially in technical or difficult cases.

More scandalous, it is possible that, in the future, AI-based risk assessment and decision-support tools can affect the decision of bail, sentencing, or parole by making predictions regarding the probability of a reoffender or failure to appear (Rashid and Jamil, 2022; International Justice Institute, 2023). Though, in theory, such systems might encourage more evidence-based and transparent decisions, they cast grave concerns regarding transparency, explainability, and possible bias (Iqbal and Hussain, 2022; Ahmed and Khan, 2023).

The analysis and presentation of the digital evidence in court can also be analyzed and presented with the help of AI. Surveillance footage processing, phone records, and forensic data can be automated systems that can help to generate more structured evidence material to be considered by the court (Abbas and Iqbal, 2024). When correctly validated, it can enhance the efficacy of the fact-finding process and aid to decrease wrong convictions that are due to missing or poorly analyzed evidence.

Altogether, AI can contribute to the efficiency, accuracy, and justice of the judicial procedures in Pakistan, which is reflected in the objectives and research questions of this study on the further improvement of case solving and decision-making. Nevertheless, to harness such potential, it is important to design it closely, have intensive judicial review, and explicit protections such that AI will be used during support, but not substitute of human judgment and responsibility.

Challenges and Limitations

The issues of implementation of AI into the criminal justice system of Pakistan have significant challenges and limitations despite its potential. These barriers are institutional, legal, ethical, and technical and they directly inform the research question of the study on hindrances to the implementation of AI.

One of the greatest limitations is insufficiency in technological infrastructure and resources. The deployment of AI demands high-quality connectivity, a large amount of data storage, and high-performance computers, which are not evenly distributed in Pakistan, especially between the rural and urban areas (Baig and Zafar, 2021; Farooq and Khan, 2023). In the absence of bridging this digital divide, AI interventions could be used to cement regional and socio-economic disparities in access to justice.

Another severe limitation is the quality and availability of data. AI systems rely on huge, precise and representative datasets. Pakistan In Pakistan, criminal justice statistics are frequently fragmented, incomplete or inconsistent and may have biases in policing and prosecution of the past (Ahmed and Khan, 2023; Rahman and Bilal, 2024). Any form of training algorithms with this type of data will create a risk of restating such discriminatory trends and degrading the credibility and validity of AI-based results (Iqbal and Hussain, 2022).

Ethical and legal systems are also poorly developed. At the moment, an in-depth statutory framework dedicated to AI in criminal justice, including the provisions of algorithmic transparency, explainability, and accountability, does not exist in Pakistan (Mahmood and Niaz, 2024; Mirza and Khan, 2024). The practice and law of data protection are in its early stages, and the issues of privacy, surveillance, and possible abuse of personal information are still present (Rahman and Bilal, 2024; Saeed and Akhtar, 2023).

Human-machine interaction is more problematic. Even though AI is capable of automating some of the tasks and aiding in decision-making, it cannot and must not substitute human judgment, especially in those fields that touch upon the issue of liberty and basic rights. It runs the risk of the so-called automation

bias, in which judges, prosecutors, or police officers blindly trust the recommendations of algorithms (International Justice Institute, 2023; Hussain and Mehmood, 2023). The training and awareness are thus necessary to make sure that those involved in the practice are aware of the capabilities and restrictions of AI and still have a meaningful control.

Lastly, institutional inertia and financial constraints could slack or distort the AI adoption. The process of introducing AI systems and employee education is a long-term cost and requires political commitment (Raza and Shah, 2024; Global Institute for AI Policy, 2022). The absence of a rights-respecting approach, which is clear and defined, means that the piecemeal projects or the projects funded by donors can easily lead to the formation of fragmented systems that would not interact appropriately with the current criminal justice procedures.

These issues are essential to be tackled so that AI can be used positively in the criminal justice system of Pakistan and to the objectives of enhanced accuracy, fairness, and protection against false convictions, as opposed to their subversion.

Case Studies and Examples

To describe the new application of AI in the system of criminal justice in Pakistan, it is possible to refer to a variety of practical projects and reported experiences. Despite a lack of systematic empirical analysis, available reports indicate that AI has been been tested in such domains as surveillance, forensic analysis, predictive policing, and court administration (Khan and Malik, 2022; Malik and Qureshi, 2022; Abbas and Iqbal, 2024).

Facial recognition AIs deployed in the surveillance of live or recorded CCTV feeds have been reportedly used in some urban police departments to identify suspects in the investigation of serious crimes (Khan and Malik, 2022; Qasim and Rehman, 2021). Such projects illustrate the possibilities of AI to increase the investigation ability but also bring up the issues of privacy, data safety, and the possibility of wrongful identifications.

Artificial intelligence-based forensic tools are also starting to appear in specific high-stakes cases, with digital evidence being reconstructed and witness testimony being corroborated with the help of an artificial intelligence (AI) analysis (Abbas & Iqbal, 2024; Mustafa, 2022). These applications demonstrate that AI can expedite a complicated forensic process and make the preservation of the evidentiary process in the court stronger.

It has also been mentioned that pilot projects in predictive policing have been reported especially in large cities with better-organized crime data (Malik and Qureshi, 2022; Zaman and Yousaf, 2023). These systems have been applied in informing the patrol routes and operations in specific areas by identifying possible crime hotspots and temporal trends, demonstrating how AI can be incorporated in prevention initiatives.

On the judicial front, the digitization of judicial processes and AI-enhanced document analysis have been experimented in certain high-ranking courts, where electronic filing and database applications can assist with large volumes of cases being managed by judges and staff (Ali and Rahman, 2023; Khan and Mahmood, 2023). Even though these systems are not completely AI-based, they are indicative of a gradual transition towards more data-informed and technology-assisted adjudication.

These are still partial and, in fact, experimental, but these examples would represent how AI is starting to influence the law enforcement, forensic, and court procedures in Pakistan. They give this study a more practical framework in terms of grounding the rest of the analysis of opportunities, risks, and policy options of AI in the criminal justice system.

Discussion and Analysis

Impact of AI on Pakistan's Criminal Justice System

Artificial intelligence (AI) is starting to make its mark in the criminal justice sector of Pakistan, but its overall effects are minimal and unequal (Khan and Malik, 2022; Ali and Rahman, 2023; Abbas and Iqbal, 2024). Predictive analytics and crime-mapping applications based on AI provide an opportunity to allocate the police resources more strategically by detecting the crime trends and hotspots, which can fundamentally change the nature of law enforcement by making it more proactive rather than reactive (Baig and Zafar, 2021; Malik and Qureshi, 2022; Zaman and Yousaf, 2023). Although such tools can be used to enhance efficiency, empirical evidence on how such tools can be used to reduce crime or wrongful convictions in Pakistan has not been established.

Forensic and evidentiary tools that are assisted by AI offer a more direct addition. The use of automated CCTV camera footage, effects of digital evidence, and forensic data analysis can help fast-track the investigation and minimize the chances of missing important evidence (Mustafa, 2022; Abbas and Iqbal, 2024). Principally, improved evidence treatment can be more systematic and results in the increased accuracy of criminal trials and fewer wrongful convictions. On the same note, initial uses of AI-enhanced case management and legal research technology in courts can assist in dealing with delays and backlogs

through better document management and access to precedents (Ali and Rahman, 2023; Khan and Mahmood, 2023).

Nevertheless, the existing influence of AI is not significant because it is done in pilots and urban areas. Smaller-scale digitization, institutional inability, and insufficient all-encompassing regulation limit larger adoption (Ahmed and Khan, 2023; Raza and Shah, 2024). Furthermore, the very tools that are supposed to be efficient can cause some new risks in case they are implemented without disclosure, sound data or proper surveillance.

Comparative Perspectives

The example of jurisdictions, like the United States, the United Kingdom, Canada, and the European Union, demonstrates the possibilities of AI in criminal justice and the dangers of implementing AI in criminal justice (Smith and Johnson, 2021; Smith and Lee, 2021; Global Institute for AI Policy, 2022). Although AI has been used to analyze crime, forensically process and administer justice, international experience also shows that biased data and non-explanable algorithms can reproduce the socio-economic and racial inequalities, especially in predictive policing and risk assessment (International Justice Institute, 2023).

In comparison to these jurisdictions, the adoption of AI in Pakistan is not as widespread as it can be because of poor digital infrastructure, dispersed data systems and insufficient regulatory framework (Farooq and Khan, 2023; Ahmed and Khan, 2023; Mahmood and Niaz, 2024). This comparative disadvantage, in turn, allows making use of the experience of other countries and developing frameworks of the rights-based approach and context-specificity instead of copying the untested models (Singh and Patel, 2021; Raza and Ali, 2022). The necessity of transparency, human control, and legal responsibility may be supported by comparative understanding as the conditions of the responsible use of AI.

Ethical and Legal Implications

The major ethical and legal issues to assess AI within the criminal justice system in Pakistan include ethical and legal issues. The main concern is algorithmic bias since AI systems developed based on non-representative data might support the status quo in policing, prosecution, and sentencing (Iqbal and Hussain, 2022; Farooq and Khan, 2023). When a society has a socio-economic and regional inequalities, blind dependence on such systems endangers substantive fairness and trust of the people.

There are further challenges of transparency and explainability. A lot of AI systems are treated as black boxes and it is challenging to have judges, lawyers, or defendants know how the conclusions are arrived at (International Justice Institute, 2023; Ahmed and Khan, 2023). This compromises the due process, the right to challenge evidence, and the responsibility of mistaken results and these aspects are not sufficiently addressed by the current legal system in Pakistan (Mahmood and Niaz, 2024; Mirza and Khan, 2024).

A privateness issue is also critical. Surveillance of people and data processing with the help of AI implies the comprehensive use of biometric and personal information, which increases the risk of intrusive surveillance and abuse in the case of a low level of data protection laws (Qasim and Rehman, 2021; Saeed and Akhtar, 2023). The automation bias also aggravates the aspect of decision-making because criminal justice participants can easily trust the results of algorithms without effective analysis (Hussain and Mehmood, 2023). The discussed risks make it obvious that AI-specific regulation, imposing data protection standards, and institutional oversight mechanisms are required (Ahmed and Khan, 2023; Mahmood and Niaz, 2024; Raza and Shah, 2024).

Future Prospects and Policy Directions

Under the condition of properly regulated usage, AI can provide valuable opportunities to improve evidence management, case processing, and rehabilitation plans in the criminal justice system of Pakistan (Hussain and Mehmood, 2023; Raza and Shah, 2024). The future opportunities are seen in digital forensics, unified information platforms, and AI-assisted case management to decrease time loss (Abbas and Iqbal, 2024; Ali and Rahman, 2023). Risk assessment and rehabilitation planning are AI-based options that could help to decrease recidivism in correctional settings when implemented with rigid ethical boundaries (Ahmed and Qureshi, 2021; Rashid and Jamil, 2022).

To achieve such benefits, a standardized policy is needed. To establish a robust legal system concerning transparency, accountability, and data privacy in AI-assisted criminal justice, Pakistan should come up with a complete legal framework (Ahmed and Khan, 2023; Mahmood and Niaz, 2024; Rahman and Bilal, 2024). Infrastructure investment, data quality, and professional training are needed to prevent the use of algorithms wrongly and over-reliance (Baig and Zafar, 2021; Farooq and Khan, 2023). The independent evaluation and public participation can be used to guarantee the legitimacy and protection of rights by a staged, pilot based implementation model (Raza and Ali, 2022; International Justice Institute, 2023). More importantly, AI should be considered as a helper and not as a decision-maker, and the final decision

should always be made by a human decision-maker (Iqbal and Hussain, 2022; Hussain and Mehmood, 2023).

Conclusion

The article has reviewed the extent, consequences, and governance issues surrounding the introduction of the artificial intelligence (AI) into the criminal justice system of Pakistan. The discussion shows that AI can assist policing, forensic investigation, judicial administration, and correctional management to enhance efficiency, evidence Management, and decision-support procedures (Khan and Malik, 2022; Ali and Rahman, 2023; Abbas and Iqbal, 2024). These technologies provide a promising but limited answer to institutional weaknesses that have existed in the past in a system overloaded by case backlogs, resource constraints and procedural delays.

1.1.1 *Simultaneously, the research notes that AI implementation in Pakistan is decentralized, pilot-tested, and urbanized, and little empirical analysis of its impact on conviction rates, false imprisonment, or systemic bias has been done (Ahmed and Khan, 2023; Raza and Shah, 2024). Although AI-assisted forensic tools and case management systems can potentially help to improve accuracy and timeliness, they can only be beneficial based on the data quality, institutional capacity, and proper oversight. Devoid of these conditions, AI is a threat of creating new types of error, bias, and obscurity in the decision-making process of criminal justice.*

1.1.2 *The article also highlights the significance of the ethical and legal issues, including the algorithmic bias, the absence of transparency, the risk of privacy, and the automation bias, as the most serious challenges to the legitimacy of AI use in the criminal justice (Iqbal and Hussain, 2022; Rahman and Bilal, 2024). Without a unified legal framework on accountability, explainability, and data protection, AI-assisted decisions will poke a hole into the due process and societal confidence, particularly in a socio-legal environment where inequality and lack of equal digitization exist (Mahmood and Niaz, 2024; Mirza and Khan, 2024).*

1.1.3 *As comparative experiences in other jurisdictions demonstrate, AI can be used to improve the results of criminal justice only when it is developed in strong regulatory frameworks and models of rights-based governance (International Justice Institute, 2023; Raza and Ali, 2022). The relative early position of the AI adoption in Pakistan is also a chance to gain experience and create context-sensitive legal and policy frameworks that focus on transparency, human control, and constitutional protection.*

1.1.4 *Finally, AI cannot be regarded as a replacement to human judgment in the criminal justice system of Pakistan but can be considered an aid. Its responsible implementation needs specific legal*

regulation, institutional capacity-building, moral control, and gradual implementation. In the absence of these, AI will cause more inequalities and violations of rights than promote justice and the rule of law. With the right controls in place, however, AI can be useful in creating a more efficient, more fair, and more accountable criminal justice system in Pakistan.

Policy Recommendations

The findings of the article have shown that the adoption of AI within the criminal justice system in Pakistan must be done cautiously with a legal basis and institutional support. An effective legal and regulatory framework is also necessary to regulate the use of AI in the investigation, prosecution, adjudication and corrections, especially concerning data protection, transparency, accountability and how AI-assisted evidence is treated in courts. Judicial practice directions which define admissibility and review standards should be used to supplement legislative changes.

Meanwhile, it needs to invest in digital infrastructure, data quality, and institutional capacity. Records digitization, well-developed data-sharing tools, and specific training of criminal justice actors are needed to make the use of AI tools informed and critical. The use of AI must not be on a large scale and must not be judged independently, but must be used as a decision-support tool and not a replacement of human judgment within a proper ethical control.

Future Research Directions

The proposed study would benefit the future by measuring the effects of AI applications on the criminal justice system in Pakistan, specifically about the cases results, the chances of error, and the perception of justice. It should also be interdisciplinary so as to come up with transparent and context-sensitive AI models that are compatible with the Pakistani legal and institutional framework. Additional research on the use of AI-based surveillance, data security, and constitutional rights, and comparative research on South Asian and Global South countries would also be useful in guiding the responsible use of AI in Pakistan.

References

Abbas, J., & Iqbal, Z. (2024). The impact of AI on forensic investigations in Pakistan. *Forensic Science International, 33*(2), 195–210.

Ahmed, K., & Qureshi, N. (2021). AI applications in corrections: A Pakistani study. *International Review of Criminology and Penal Reform, 33*(3), 195–215.

Ahmed, S., & Khan, M. (2023). Artificial intelligence in Pakistan's legal framework: Opportunities and challenges. *Islamabad Law Review, 45*(2), 157–178.

Ali, F., & Rahman, S. (2023). AI in judicial decision making: A Pakistani perspective. *Journal of Legal Tech, 20*(1), 45–67.

Ali, Z., & Hussain, D. (2022). *Machine learning in crime detection: International trends and local applications.* Karachi, Pakistan: National University of Sciences and Technology Press.

Awan, H. N., & Siddiqui, S. R. (2023). The role of artificial intelligence in countering terrorism in Pakistan. *Journal of Security and Intelligence Studies, 14*(2), 175–198.

Baig, L. A., & Zafar, F. (2021). The future of policing: AI integration in Pakistan's law enforcement. *Police Science Quarterly, 31*(3), 256–275.

Farooq, O., & Khan, U. (2023). The digital divide and AI in Pakistan. *Asian Journal of Information Technology, 22*(2), 88–102.

Global Institute for AI Policy. (2022). *AI in criminal justice: A global perspective with focus on South Asian developments.* Washington, DC: Global Institute for AI Policy.

Hussain, D., & Mehmood, R. (2023). The future of AI in Pakistan’s criminal justice system. *South Asian Journal of Future Studies, 27*(1), 15–40.

Iqbal, T., & Hussain, M. (2022). Ethics in AI: Challenges in the Pakistani judicial system. *Technology and Society, 18*(4), 210–229.

International Justice Institute. (2023). *Report on artificial intelligence and human rights in criminal justice.* Geneva, Switzerland: International Justice Institute.

Khan, A., & Malik, S. (2022). The impact of AI on law enforcement in Pakistan. *Journal of Criminal Law and Technology, 15*(2), 134–155.

Khan, F. A., & Mahmood, A. (2023). Artificial intelligence in courtroom proceedings: A comparative study with European systems. *Journal of Comparative Law, 27*(4), 342–367.

Khan, U. A. (2023). Ethical considerations of AI in criminal proceedings. *Journal of Legal Ethics, 16*(4), 401–420.

Mahmood, B., & Niaz, I. (2024). Legal implications of AI in criminal justice in Pakistan. *Pakistan Law Review, 31*(1), 34–60.

Malik, A. R., & Qureshi, B. N. (2022). AI and crime prediction: A case study in Lahore. *Pakistan Journal of Criminology, 12*(3), 234–251.

Mirza, E., & Khan, S. (2024). Legal framework for AI technologies in criminal investigation: An analysis of Pakistani laws. *Pakistan Journal of Legal Studies, 8*(1), 34–59.

Mustafa, G. (2022). Role of artificial intelligence in combating cybercrime in Pakistan. *Pakistan Journal of Cybersecurity, 3*(1), 58–76.

Qasim, M., & Rehman, S. U. (2021). AI-based surveillance systems in Pakistan: Legal and ethical implications. *Journal of Privacy and Surveillance, 9*(1), 22–47.

Rahman, T., & Bilal, M. (2024). Data privacy in AI systems: Pakistan's emerging legal landscape. *Information Technology Law Journal, 25*(3), 289–307.

Rashid, A., & Jamil, N. (2022). AI in criminal risk assessment: A new frontier for Pakistan's legal system. *Law and AI Review, 5*(3), 101–123.

Raza, H., & Ali, Z. (2022). Comparative analysis of AI in criminal justice systems. *Journal of International Criminal Justice, 24*(3), 320–350.

Raza, H., & Shah, N. A. (2024). Implementing AI in Pakistan's criminal justice system: A policy analysis. *Journal of Technology and Law, 19*(1), 45–67.

Saeed, T., & Akhtar, P. (2023). AI and the right to privacy: Challenges in the Pakistani judicial system.

Journal of Constitutional Law, 22(2), 88–110.

Singh, A., & Patel, V. (2021). Comparative study of AI in criminal justice: India and Pakistan. *South Asian Law Review, 8*(2), 112–130.

Smith, J., & Johnson, L. (2021). *AI and criminal justice: Global perspectives.* Oxford, UK: Oxford University Press.

Smith, J., & Lee, H. (2021). *Global perspectives on AI in criminal justice.* Oxford, UK: Oxford University Press.

Zaman, K., & Yousaf, M. (2023). Use of artificial intelligence in crime prediction and prevention: Lessons for Pakistan. *International Journal of Police Science, 20*(1), 47–64.