



## **Artificial Intelligence and Criminal Justice System: A Comparative Study with India, UK, and USA**

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### **ABSTRACT**

The AI in the criminal justice system use is revolutionizing how India, the UK, the US, and many others are dealing with crimes and justice. This comparative study examines AI's uses in policing, risk assessment, and surveillance in these jurisdictions to explore the innovation and the incited ethical, legal, and social questions raised by AI. For instance, whereas AI applications such as predictive policing and facial recognition increase judicial effectiveness, they remain contentious because they alter privacy, transparency, and bias, which affect the marginalized. Legal frameworks vary significantly: the UK's GDPR enshrines data protection well, but the US has erratic regulations because of its system of federalism, and India finally awakens to regulatory oversight and signals slow yet steady steps towards regulating AI. Examples include *State v. Loomis*, by and on behalf of the following members of the society; and Justice K.S. Puttaswamy. Misuse of artificial intelligence, as evident in cases highlighted, such as the one concerning the Union of India, shows the importance of artificial intelligence deep learning that is transparent, humane, and highly accountable. This therefore means that every jurisdiction needs to have an individual set of regulations and ethics of what AI must adhere to protect basic human rights alongside the responsible usage of AI. The main recommendations include copying GDPR in India, federal regulations in the USA, regular audits to minimize bias exposure in AI, and human intervention while using the assistance of AI. AI can promote justice while protecting human rights if coordinated by policymakers with insights from technologists and CSOs in the development of structured policies.

**Keywords:** Artificial Intelligence, Criminal Justice, Predictive Policing, Privacy, Bias, India, United Kingdom, United States, GDPR, Surveillance, Human Rights

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### **Introduction**

AI has made the criminal justice system all over the world innovative and changed the ways every crime prevention, investigation, and trial procedure. During the last decade and the current decade, India, the United Kingdom, and the United States have started to experiment and use AI in the criminal justice system domain which helps improve efficiency and lessen bias. AI's ability to conduct data analysis quickly makes it possible for it to detect crimes, anticipate other crimes, and even help in the investigation. But this evolution of AI in the criminal justice system presents both opportunities and challenges. The incorporation of new changes or use of AI is conducted with the consideration of ethical approval in every jurisdiction concerning procedural fairness and human rights, especially in the decision-making that impinges on the liberty of individuals. The variety of the regulatory tools adopted in these nations underlines the necessity to launch the interconnected comparative analysis of the AI application in the criminal justice field and the potential and legal consequences of the risks associated with decision-making based on artificial intelligence.<sup>1</sup>

In this research, we will identify how the integration of AI in the judiciary system is influenced legally and constitutionally in India, the UK, and the US, as well as understand the opportunities and threats of each system together with the safety measures they use to support the technological advancements and justice. This study is mainly comparative, to identify the relative advantages and drawbacks of innovations in the application of AI, along with offering suggestions as to how each might be useful to each jurisdiction. In the process of the research, we turn to case law, statutes, and commentary to determine how well AI is succeeding at maintaining justice and avoiding the built-in bias in automation. In this study, this approach will highlight the legal framework that surrounds artificial intelligence and its application in these countries and help contribute to a more extensive understanding of the significance of artificial intelligence in a fair world.

AI in criminal justice background has its origins in crime-solving assistance and the capacity to compensate for organizational disorders within judicial systems. Over time, AI technology has been applied in multiple areas of criminal justice intended for crime prediction, risk assessment, and sentencing. In India, the application of tools such as predictive policing models is meant to properly marshal police resources, but that involves direct threats to privacy without significant regulation. The United Kingdom, for instance, through systems such as the Harm Assessment Risk Tool (HART), has deployed

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<sup>1</sup> Kaveri Sharma and Inderpreet Kaur Saggi, *Artificial Intelligence, Robotics and Law* 132 (Central Law Publication, Allahabad, 1st edn., 2024).

predictive analytics in policing, thus raising issues of how algorithmic decision-making exists. AI is already in use in the United States police services, with some applications such as COMPAS (Correctional Offender Management Profiling for Alternative Sanctions) used to profile offenders' likelihood of recidivism. While it may be useful to pedants like myself, the case is not, and never will be, properly titled *Loomis v. Wisconsin*<sup>2</sup>. The case *State v. Loomis*<sup>3</sup>, brought important questions to the fairness and reliability of algorithms in activities involving judiciary, especially in the use of artificial intelligence. These examples demonstrate that there were sharply defined yet rather intertwined trajectories of each jurisdiction's evolution towards an optimized use of AI as a tool to serve criminal justice goals.

The main research question of this study is to examine and compare the current state of AI's implementation in the criminal justice systems of India, the United Kingdom, and the United States by comparing policing, legal adjudication, and privacy concerns. In doing so, the study aims to evaluate how it enhances the effectiveness and reliability of criminal justice besides responding to its emerging ethical, social, and legal implications. Since AI is a decision-maker by design, the study will address how courts in those jurisdictions apply the admissibility and reliability of AI products, the measures to ensure non-biased results, and the legal regimes controlling AI across the respective areas.

This research covers the study of certain AI-driven systems in each of these jurisdictions, and their effects are evaluated through doctrinal analysis. Also, the research discusses international policies and recommendations for AI in criminal justice to gain the broadest perspective. Thus, by comparing the adherence to constitutional rights as experienced in India, the UK, and the USA, this work aims to provide advice for future policies on the proper manner and pace of an AI implementation so that essential rights are preserved while trust in justice is maintained.<sup>4</sup>

Empirically, the research employs the doctrinal method of analysis, where primary and secondary materials are analysed systematically to give a balanced perspective of the impact of AI in the criminal justice systems of India, the UK, and the USA. Sources include statutes, cases concerning AI use in any of the legal jurisdictions, and regulations. For example, Section 354D of the Bharatiya Nyaya Sanhita, the India Penal Code, is scrutinized predictive policing, and identical analysis of the US and UK statutes helps to identify how these regions manage the problems of data protection in AI. Scholarly articles, government reports, and other international sources are used as secondary data sources in the context of this study; it also features the GDPR established by the EU. By inferring from these materials, the research builds up a legal paradigm that helps in measuring how AI supports the three selected countries' CJ systems' efficiency alongside the dangers that it poses for the subject's human rights.

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## Understanding AI in Criminal Justice

AI in criminal justice refers to the various integrated systems that employ substitute intelligence for human intelligence; this includes data analysis, pattern identification, and projected algorithms. AI in the form of machine learning, natural language processing, and computer vision is commonly used by information systems to analyze big data and make connections that help in crime prevention, appraisal of risks, and decision-making processes in a court of law, among others. The foundational models of AI are either rule-governed or depend on data inputs for learning and growth as they interact with more information. Through such a function, this technology can execute activities that require human judgment, like detecting possible criminal actions or assessing risk factors in real time. In the criminal justice use case specifically, AI is most useful when identifying tendencies in criminal databases and information sharing through social media platforms, making work easier for police in preventive policing and investigations. However, its capability to influence human lives, such as predictions in crime or sentencing, has drawbacks revolving around bias and accountability of the same. Cue the question of how and when AI can be used while staying true to justice and protecting the rights of all stakeholders.<sup>5</sup>

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## Definition and Concept of Artificial Intelligence

Artificial intelligence in the context of the criminal justice system encompasses several computational approaches developed to emulate human intelligence processes in solving a particular problem or carrying out a specific activity. AI works on algorithms that can accept large amounts of data, analyze them, and come up with conclusions based on patterns learned or rules programmed. AI used in criminal justice includes machine learning, which, as its name suggests, lets the system develop as it is exposed to new data in areas such as predictive policing and risk assessment. These systems are characterized by the capacity to analyze large volumes of data in ways that are faster and at scales that cannot be easily emulated by human beings. In this regard, AI serves as a powerful instrument in finding more criminals, estimating risks, and helping with decisions such as sentencing. However, knowing the limits of this concept and how it is introduced to AI, it is crucial to use this technology in criminal justice, taking into account certain rights of individuals, such as liberty and privacy.

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<sup>2</sup> 881 N.W.2d 749 (Wis. 2016).

<sup>3</sup> *Ibid.*

<sup>4</sup> Kevin D. Ashley, *Artificial Intelligence and Legal Analytics: New Tools for Law Practice in the Digital Age* 123 (Cambridge University Press, Cambridge, 1st edn., 2018).

<sup>5</sup> Serena Quattrocolo, *Artificial Intelligence, Computational Modelling and Criminal Proceedings: A Framework for A European Legal Discussion* 127 (Springer, Switzerland, 1st edn., 2020).

## Applications of AI in Criminal Justice

AI implementations across the criminal justice system are versatile and rich with the potential to create breakthroughs but with legal and ethical concerns. One of the most common areas of application regards predictive policing, in which AI tools and approaches use computing analytics to determine the likelihood time, and place of crime and access law enforcement resource allocation. One such practice that has been adopted in several cities in the United States is the "PredPol" model, in which the link to the crime hotspot is made by analysing geo-referenced data. Predictive policing tools in India are still relatively nascent, but concepts such as crime mapping, analytics, and predictive systems (CMAPS) are being built to allow preventive measures. However, predictive policing has continued to face criticism on grounds that it creates biases in data inputs; this is seen in "*State v. Loomis*"<sup>6</sup>, the court raised concerns regarding the bias of COMPAS, a risk assessment tool applied to sentencing. In this context, we have to be careful not to use AI-driven tools that are tuned in ways that will repeat or reinforce discrimination towards some groups.

There are many areas of using AI, but some of the most crucial ones are surveillance and facial recognition, for instance, as well as image analysis. AI facial recognition enables rapid detection of people from surveillance pictures and systems, which is very useful during investigations. For example, the South Wales Police in the UK have incorporated the use of FRT to identify people in crowds during events, but the issue of privacy and racism has been an issue. The UK's "GDPR" requires compliance with data protection standards for AI systems while placing the value of privacy rights above police work. On the other hand, in India, where there are no equivalent data protection laws to the GDPR since the passing of the latter in 2018, AI functionality for surveillance purposes raises concerns about the freedom of an individual as the state gears up to enhance its capacity for surveillance. This decision of the Supreme Court of India is in the case of *Justice K. S. Puttaswamy v. Union of India*<sup>7</sup> has stridently recognized the right to privacy as fundamental, and this, in the face of AI-driven surveillance, calls for more comprehensive regulations.

Another area that owes much to AI in criminal justice is data analysis; this is especially helpful in the evaluation of evidence and investigation. AI computers are often capable of sorting large volumes of databases and identifying patterns and information that can be used for criminal profiling, associating criminals with crime scenes, and identifying complicated webs. Such capability enables the law enforcement agencies to do data-intensive investigations such as cybercrime and financial fraud in a more precise style. SI. ID According to agencies in the United States, AI is used to monitor social media accounts for criminal activities, rightfully posing questions regarding the limitation of surveillance. At the same time, the Indian police used data analysis in cybercrime detection, but there are issues of tight regulation and legal control.<sup>8</sup>

## AI in the Criminal Justice System: Comparative Analysis

In India, AI is being adopted in criminal justice on a selective adoption model after observing its effectiveness on policing and surveillance while aiming at creating for improving policing and efficiency and practices of the police force. AI is also advancing in its applicability in law enforcement, more so in predictive policing as well as in real-time surveillance. Programs like CMAPS allow police agencies to use the crime data obtained to estimate areas where crime is most likely to occur in the future. Likewise, facial recognition systems are used for security and monitoring, even though their key objective in most cities is to aid in the detection of criminals. Within the judiciary, AI-based solutions are highlighted to help manage the flow of cases and documents in the courts and lessen backlog. Although these applications are present, they are not yet mature, with large-scale employment mostly precluded by infrastructural and regulatory considerations. As India has shifted its attention towards police reforms and their respective development, AI offers great potential for police agencies to revolutionize the traditional policing model, keeping in mind it still exists in a more or less regulated developmental stage.<sup>9</sup>

## Current Status and Key Applications

AI has been predominantly applied to surveillance and policing and in the context of judicial proceedings in India. Security using surveillance has been applied in various areas of use and occasions; this includes facial recognition that enables the authorities to monitor and track subjects relying on real-time data. The use of AI control systems is mainstream in policing India, as observed by the Integrated Criminal Justice System that supports data sharing amongst police departments. In judicial processes, it is used to provide support to the judges in their research to search for the existing case laws and precedents to improve the existing judicial speed. Moreover, police usage of AI is slowly emerging as Indian policing adopts predictive policing to direct resources better. However, a significant problem persists in most countries as there is no standardized policy regarding the use of AI in criminal justice; in such cases, the range and coherence of application are constrained, and a strong set of rules and principles of ethical conduct should be established to govern the use of AI in criminal justice.<sup>10</sup>

<sup>6</sup> 881 N.W.2d 749 (Wis. 2016).

<sup>7</sup> (2017) 10 SCC 1.

<sup>8</sup> Alisha, *Use of Artificial Intelligence in Criminal Justice System* 104 (Blue Rose Publishers, New Delhi, 1st edn., 2021).

<sup>9</sup> "The Role of Artificial Intelligence in Criminal Justice - Reality and Perspective", 10 *Law and World* 80-87 (2024).

<sup>10</sup> Dennis J. Baker & Paul H. Robinson, *Artificial Intelligence and the Law: Cybercrime and Criminal Liability* 150 (Routledge, London, 1st edn., 2020).

### ***Challenges and Legal Issues***

The Indian experience of the use of AI in criminal justice encounters several problems, the most important of which are connected with privacy violations, the lack of regulatory legislation, and the risks of algorithmic bias. Without adequate data protection legislation, this issue nudges important questions of privacy whenever AI is used for surveillance and predictive policing. As for the Supreme Court of India, it declared privacy as a fundamental right in "*Justice K.S. Puttaswamy v. Union of India*"<sup>11</sup> on the use of AI in law enforcement, which amounted to privacy infringement because of the present lack of a comprehensive legal framework formulated in the UK as has been done in the EU through the GDPR. Also, the use of AI in the predictive policing system tends to develop a bias against particular groups within society. They may continue discriminations that are contrary to the Indian Constitution and other esteemed basic tenets. In other words, regulating AI currently used and possibly in the future in criminal justice remains a challenge for India while trying to pull through measures for the proper regulation of such use without violating the rights of the people and endorsing existing social prejudices.

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### **United Kingdom's Perspective on AI and Criminal Justice**

The use of integrated AI in the United Kingdom has been approached systematically and linearly, and most importantly, there have been observed dataset-specific guidelines, ethical issues, and transparency. AI is essential in UK policing and security through issues of prediction, policing through technology, digital justice, and policing by automating data analytics. UK governments have maintained their strong stance on data protection through the GDPR and the Data Protection Act 2018, meaning that AI applications must respect privacy and act ethically. Therefore, the use of artificial intelligence in criminal justice, especially in areas that involve predictive analysis as well as surveillance, is checked from this perspective, and transparency measures are carried out frequently. Compared with other leading jurisdictions, the UK has a relatively well-developed legal framework for AI in criminal justice, but the presented legal rules and recent challenges demonstrate that it has not solved all the problems confronting it, including the prejudiced racial distribution of AI datasets and accounting for AI's decision-making.<sup>12</sup>

#### ***Key AI Integrations in Law Enforcement***

In the United Kingdom, the application of AI has been observed mostly in areas such as predictive policing, digital courts, and data analysis. Harm Assessment Risk Tool (HART), a type of predictive policing, is a system that considers prior criminal-related cases and looks for persons likely to engage in criminal activity or become victims. It is widely used in many organizations but has often been criticized for issues to do with bias and lack of transparency. UK courts also adopt AI technology since working in parallel with digital courts; digital courts apply automated systems for case management. Integrated artificial intelligence-based data analysis in policing facilitates crime fighting as the system deals with the dilemma of large data and offers insights for efficient crime-solving techniques. However, integration has come with ethical and legal concerns despite enhancing operations, mainly focusing on decision-making by the algorithms and, possibly, inputs from bias withstands.

#### ***Legal Framework and Regulatory Challenges***

The GDPR and the Data Protection Act 2018 are an enablement of the UK's laws that relate to the use of artificial intelligence in criminal justice. These regulations require compliance with conditions on data protection and openness so that these artificially intelligent systems used in law enforcement do not violate citizens' rights. In addition, the Information Commissioner's Office (ICO) regulates AI, especially in cases that involve a decision that affects the future of an individual. However, these are still challenges; it is, for instance, still a problem to address bias in the algorithms used in predictive policing, let alone demanding that there be accountability when a decision based on AI is wrong. Social concerns, for example, racism and fairness, are now and again expected to come up, as was the case with the scrutiny of the operation of the HART system. Therefore, although the UK has gone through the process of setting up legal regulation of AI in criminal justice activity, more efforts are needed to eliminate possible risks for AI and ensure that the use of AI in criminal justice will be as ethical as possible.

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### **The United States' Use of AI in Criminal Justice**

The United States has been in the leadership position in incorporating AI in crime fighting by incorporating advanced risk assessment algorithms, surveillance systems, and predictive policing. AI in the criminal justice system of the USA is equally widely spread; several states have algorithm-based risk assessment tools, including COMPAS. These are usually applied at the sentencing stage to inform the discretion in the estimation of the likelihood of recidivism. However, with the use of AI applications, a lot of legal and ethical issues have arisen, especially on issues relating to racist or unfair bias in aspects such as sentencing and risk assessments. Case laws like "*State v. Loomis*"<sup>13</sup>, which also show that the judiciary has been worried about the opaqueness of using AI in the decision-making process. Despite a lack of federal regulation of AI usage in criminal justice in the United States, the

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<sup>11</sup> (2017) 10 SCC 1.

<sup>12</sup> Purvi Pokhariyal, Amit K. Kashyap, and Arun B. Prasad, *Artificial Intelligence: Law and Policy Implications* 74 (Eastern Book Company, Lucknow, 1st edn., 2020, reprint 2024).

<sup>13</sup> 881 N.W.2d 749 (Wis. 2016).

policies and judicial decisions demonstrate that it is high time to develop effective and fair regulation of AI to prevent biases and provide accountability.<sup>14</sup>

### **Prominent AI Applications in the U.S. Justice System**

Largely across the United States, criminal justice sectors with AI are visible in algorithmic sentencing, risk assessment, and mass surveillance. Popular for its risk assessment, COMPAS is used in determining defendants' rate of recidivism affecting their bail and sentencing. As the tool participates in enhancing the efficiency of the judicial system, its application in *'State v. Loomis'*<sup>15</sup> worried about the machine learning algorithm and the ability of the algorithm to make decisions. Another important area where artificial intelligence is used is in mass surveillance in the United States, with cameras such as facial recognition technologies being deployed in most public areas. Such systems are crucial in suspect recognition, but their use is fraught with concerns over racism and data encroachment, mainly owing to the absence of standards regulating the deployment of AI in surveillance at the federal level in the United States of America. Furthermore, facilities in data analytics also help in evaluating social media and other content, which helps in identifying criminality, which also poses privacy and ethical issues.

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### **Comparative Evaluation: India, UK, and USA**

The use of artificial intelligence in the criminal justice systems of India, the United Kingdom, and the United States is surprisingly similar, although their variations reflect the legal, cultural, and moral practices of each country. The common AI applies include surveillance, risk assessment, and policing. All three countries use surveillance technologies, especially facial recognition in security, to monitor and identify suspects within public places. While Indian authorities are attempting to combat change using advanced technological group AI monitoring in major cities and public events, more developed frameworks are used in the UK and the US, although civil liberties are still raging. Risk assessment tools also share similarities with the other, especially in parts that involve applying algorithms to estimate the prisoner's relapse rate in judicial judgments. In the United States, COMPAS helps to determine a defendant's sentence length, while the UK uses similar tools but is referred to as the HART for police work. Though India has been comparatively slow in adopting AI in its judicial system, it has started to look at such applications more seriously, although often in isolated trials that seek to increase the effectiveness of judiciaries. However, at the same time, all three countries still experience issues with bias in AI algorithms.<sup>16</sup>

There are significant differences in each country's approach to applying AI. In India, the application of AI is generally cautious, often limited to pilot programs. This approach may stem from the fact that standards for infrastructure and legal frameworks are still a work in progress. In contrast, the UK has a more formal regulatory structure, largely due to the GDPR, which enforces strict controls over data use in criminal justice while also protecting privacy rights. The United States, however, lacks federal data protection laws, leaving AI regulation to individual states. Although all three countries use AI in criminal justice, there is a qualitative variation in how they regulate AI to ensure compliance with human rights.

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### **Legal Framework Comparison**

The regulation of AI in criminal justice appears to be rather different in India, the UK, and the US, which may be due to differences in the focus of legal systems in those countries. The UK has structured rules; thus, they adopted GDPR and the Data Protection Act 2018, which impose strict privacy measures and added the obligation to be transparent in the functioning of AI systems. The Information Commissioner's Office (ICO) in the United Kingdom also has important responsibilities regarding the enforcement of the use of artificial intelligence systems in criminal justice, referencing the legislation of data protection. These regulations include stringent data usage principles that compel AI-led systems to provide the reason for their measurement and data use and promote the principle of accountability. Meanwhile, the United States does not have a federal data protection law as ample as the GDPR, resulting in varying standards from state to state. Due to the disjointed approach in setting out these rules, there are differences in the use of AI in criminal justice, with some states, such as California, applying more rules under CCPA than other states. Therefore, the uses of AI in US criminal justice are not regulated to some extent, and this puts the citizens in different regions at different levels of protection.<sup>17</sup>

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### **Ethical and Social Implications**

Ethical and social applications of artificial intelligence in criminal justice are diverse and controversial; it has developed unique problems of transparency, fairness, and societal balance in each country. In India, the main ethical issues are privacy and state spying threats accompanied by weak regulations in the country. Generally, the adoption of these AI technologies in law enforcement agencies raises issues to do with data abuse and intrusion of the freedom

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<sup>14</sup> Hifajatali Sayyed, "Artificial Intelligence and Criminal Liability in India: Exploring Legal Implications and Challenges", 10 *Cogent Social Sciences* 23 (2024).

<sup>15</sup> 881 N.W.2d 749 (Wis. 2016).

<sup>16</sup> Nora Osmani, "The Complexity of Criminal Liability of AI Systems", 14 *Masaryk University Journal of Law and Technology* 45 (2020).

<sup>17</sup> Isha Sharma, "A Legal Study on Role of AI in Criminal Justice System in India", 10 *Journal of Emerging Technologies and Innovative Research* 678 (2023).

of the people. Further, owing to India's scant regulatory environment, it becomes likely for AI systems to reinforce societal prejudices and result in discriminating polarizing practices such as policing.

Ethical concerns in the UK are therefore majorly centred on ensuring that the use of AI is done in an open manner, most especially in police areas and the judicial systems. Based on the GDPR's high standards, AI systems must maintain high forms of accountability to meet the regulations. However, concerns about bias in the use of predictive policing, which have been highlighted above regarding the HART tool, remain a cause of discussions of fairness and equality in the application of the law. The application of AI in criminal justice is also closely observed, and governments regard the ethical rules that do not allow AI to reinforce prejudice in the work.

The United States also experiences these ethical issues, but more complexities relative to the decentralized regulatory structure. There is a lot of worry and controversy regarding the application of AI tools for sentencing like that of COMPAS, which gives a clear example of the problems with both transparency and algorithm bias, all of which are evident in "*State v. Loomis*"<sup>18</sup>, where the court was sceptical of the obscurity of risk assessments. Racial bias is still a field of concern in the US, as research shows that such algorithms present a danger to the system by categorizing African Americans in a prejudicial way. As has been shown with each country's expectations for ethical and social considerations about the topic of artificial intelligence and criminal justice, there is a dire obligation for regulation regarding the implementation of such systems in criminal justice that are both transparent and just avoid potential detriment to the most susceptible of society.<sup>19</sup>

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### Challenges and Limitations in Implementing AI

Applying artificial intelligence in the criminal justice system has invented significant legal as well as ethical issues, among them privacy, security, and bias in AI. Data privacy is a major issue, mainly due to the lack of restrictive data protection laws in India but with the introduction of the 'Digital Data Protection Act, of 2023'. Most technologies applied in surveillance and the prediction of criminal activity entail the wide collection of personal data, which inevitably leads to the violation of privacy laws. This problem is worsened by the fact that the mechanisms by which artificial intelligence makes decisions or uses data are often unclear. Currently, in the United Kingdom, the GDPR is the law that governs the protection of data privacy, but as outlined in the study, there are still several ethical dilemmas when it comes to the use of artificial intelligence, especially in decision-making through elements such as predictive policing. Likewise, in the USA, state laws for data protection are insufficient and provide only nominal privacy for the clients, making a difference in the use of AI from one state to the other. Secondly, the incorporation of bias in AI algorithms is another major area of ethical concern given the fact that such algorithms can at times reproduce prejudicial processes. Case laws such as "*State v. Loomis*"<sup>20</sup>, have shown that AI risk assessments can be unfair to minorities because historical prejudices are already reflected in data.

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### Technical and Infrastructural Barriers

However, some challenges are both technical as well as infrastructural to implementing AI in criminal justice systems, which are reasonable and apart from moral and ethical questions. Lack of technology infrastructure such as the internet, weak network connectivity, and other fixed communication channels make it difficult for firms in countries such as India to fully adopt AI systems due to limitations of technology infrastructure; this remains more so in the rural and unserved areas. The requirement for a sound hardware platform as well as good data and staff capable of handling respective AI systems presents a challenge, especially in common police services, which may lack adequate IT competence to support the AI solutions. However, the employment of AI in current systems of judicial and law enforcement means that the importation of massive training, frequent maintenance, and constant updates of the systems to enhance their reliability and accuracy will be needed. In the UK and the US, AI applications in criminal justice have significantly and relatively better setups, but there are issues of compatibility of systems and technical difficulties in perusing, storing, and analysing big data. Further, the operations of the AI systems are intricate, leading to decision-making that some legal professionals may find hard to decipher, hence discrepancies between ideas behind the utilization of technology and actual usage in legal frameworks. Hence, to address these challenges, a solution that connects infrastructure, technical training, and different sectors is crucial concerning implementing AI inside criminal justice systems present in these jurisdictions.

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### Conclusion

Implementation of artificial intelligence in the criminal justice systems brings about social change at the international levels of India, the UK, and the US. This comparative study shows AI innovations such as predictive policing, risk assessment, and facial recognition have offered new ways of dealing with crimes, but these are accompanied by high ethical, legal, and infrastructural considerations. The variation in each country's approach to regulating AI is highly likely driven by cultural, legal, as well as technological differences in priorities. The United Kingdom which follows the structured GDPR

<sup>18</sup> 881 N.W.2d 749 (Wis. 2016).

<sup>19</sup> Aditi Prabhu, "Artificial Intelligence in the Context of the Indian Legal Profession and Judicial System" *Bar & Bench*, August 12, 2023.

<sup>20</sup> 881 N.W.2d 749 (Wis. 2016).

<sup>21</sup> Christopher Rigano, Using Artificial Intelligence to Address Criminal Justice Needs 1 (U.S. Department of Justice, Washington, D.C., 2019), available at: <https://www.ojp.gov/pdffiles1/nij/252038.pdf> (last visited on October 20, 2024).

has a regulated environment for data privacy, whereas the United States has a decentralized regulation, which leads to inconsistency between the states, and AI applications can experience the regulation in the United States to a different extent. India is also in the process of developing AI to augment policing and judiciary when it comes to decision-making, but still, the country lacks clear functional policies for handling this technology as well as the corresponding infrastructure for AI integration on a massive scale.

Privacy and fair treatment with AI algorithms are discussed quite often, an example being "*Justice K.S. Puttaswamy v. Union of India*"<sup>22</sup> in India and, in civil law, compatibly known as *State v. Loomis*" in the United States, the need for transparency of artificial systems, and freedom from constitutional/emerging trial injustice. Every region faces the ethical issues of AI in decision-making where the AI-modelled decisions harm minorities and perpetuate systemic bias.

Overall, the current research brings up two lessons that should be borne in mind so that the justice system agencies can fully leverage AI and analytics without infringing on rights; the legal frameworks, as well as ethical frameworks, need to be solid. India should perhaps integrate its regulation in tandem with that of the GDPR so that there is a streamlined approach. The US would benefit greatly from a federal regulation system where there is unity in the protections afforded. However, creating technology muscles, laying down responsibilities, and enhancing transparency is crucial in all three jurisdictions. Finally, the long-term approach to embedding AI in the criminal justice system remains very much reliant on the engagement of policy players, lawyers, and technology providers to establish progressive yet principle-based advances in justice services.

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## Suggestions

For that reason, due to the legal doubts and the technical difficulties that AI raises when implementing it in criminal justice, it is needed a specific framework adequate to the demands of each country. Based on the comparison of India, the UK, and the US, these recommendations are designed to improve AI adoption and avoid risks to human rights, then ensure openness and non-discrimination of the algorithm.

- Like the GDPR, India might benefit from an overarching framework for AI with clear provisions regarding data protection and a focus on the forms of transparency and accountability necessary for responsible development and deployment of the emerging technology suite. That is why the US could prospectively set federal regulations to minimize state variations for the sake of uniformity in the United States.
- Ordinary stock checking may help in monitoring and preventing discrimination in the use of the AI system employed in criminal justice. Other ways are that impact assessments can measure the social impact of AI, especially in policing and surveillance, ensuring he is held accountable.
- Making algorithms work such that their outputs are easily understandable would minimize the chances of unfair treatment. The requirement that the decision of AI concerning the rights of an individual can be explained in layman's terms can go a long way in enhancing the issue of transparency and trust.
- As targets of surveillance since AI has the potential to erode privacy, privacy protection should be complied with strictly. Specifically in the UK, where GDPR is already strong, such reach may ensure a new focus specifically for criminal justice. Similarly, India's very dynamic laws concerning data protection should be better enhanced to include AI surveillance.
- Making algorithms to be trained using a diverse dataset that captures all the population groups in the society can help in softening the impact of the bias that mostly affects these groups. It can help minimize the systematic bias of AI-based risk assessment and surveillance and achieve equality by demographics.
- Only by setting up close cooperation of tech developers, legal professionals, and policymakers is it possible to improve AI use in criminal justice. It will also enable quick communication to adjust suitable technologies according to ethical and legal norms.
- Especially in India, where the infrastructure is still unfolding, improved financing for computational facilities and technical skill development will help ensure the stable implementation of AI. The right professional can guarantee the AI applications are integrated and deployed correctly in law enforcement and judicial systems.
- Allaying worries that AI drives injustice, requiring people's supervision over some major AI-supported choices, for example, the sentencing or risk assessment, would be protective against algorithmic miscues and discrimination. That way, AI stays a tool for decision-making and not a substitute for it.
- Constant engagement with civil society and legal and technology experts would ensure that the countries developed the most effective set of AI policies. But citizens can also gain confidence given that they perceive their opinions are taken into account when the technology is developed.

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<sup>22</sup> AIR 2017 SC 4161.